U.S. Department of Homeland Security

United States Coast Guard

Foreign Passenger Vessel (FPV) Initial Certificate of Compliance (COC) Exam Tactics, Techniques, and Procedures (TTP)

U.S. Coast Guard
Force Readiness Command
(FORCECOM)

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United States Coast Guard

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CGTTP 3-72.5A
22 MARCH 2019

COAST GUARD TACTICS, TECHNIQUES, AND PROCEDURES, CGTTP 3-72.5A

Subj: FOREIGN PASSENGER VESSEL (FPV) INITIAL CERTIFICATE OF COMPLIANCE (COC) EXAM TACTICS, TECHNIQUES, AND PROCEDURES (TTP)

Ref:
(a) Development System and Standards Tactics, Techniques, and Procedures (TTP), CGTTP 1-01 (series)
(b) USCG Marine Safety Manual, Volume. II: Materiel Inspection, COMDTINST M16000.7 (series)
(c) Shipping, 46 United States Code (U.S.C.)
(d) SOLAS: Consolidated Text of the International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1988: Articles, Annexes and Certificates (Incorporating all amendments in effect from 1 July 2014), International Maritime Organization (IMO)
(e) Foreign Passenger Vessel Examiner (FPVE) Port State Control Officer Performance and Qualification Standard, MPS-PQS-TCY-FPVE (series)
(f) International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), Including 2010 Manila Amendments, STCW Convention and STCW Code, 2011 Edition
(g) The International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78)
(h) Scheduling Foreign Vessel Examinations, MPS-PR-SEC-02
(i) Preparing for Inspections and Examinations, MPS-PR-SEC-04
(j) Conducting Foreign Vessel Examinations, MPS-PR-SEC-06
(k) Revised List of Certificates and Documents Required to Be Carried on Board Ships, International Maritime Organization (IMO), MSC.1/Circ. 1409
(l) Guidelines for the Coast Guard Evaluations of Compliance with the U.S. Environmental Protection Agency's (EPA) Vessel General Permit (VGP) for Discharges Incidental to the Normal Operation of Vessels, COMDT (CG-543) Policy Letter 11-01
(m) Navigation and Navigable Waters, 33 CFR
(n) Marine Safety Center (MSC) Guidelines for Review of Locks and Latches in Doors in Escape Paths, Procedure Number: SOLAS-49
(o) Marine Safety Center (MSC) Guidelines for Review of Room-In-Room Construction, Procedure Number: SOLAS-25

(p) Guidelines for the Evaluation, Testing, and Application of Low-Location Lighting on Passenger Ships, International Maritime Organization (IMO) Assembly Resolution A.752(18).
(q) Cruise Vessel Security and Safety Act (CVSSA) of 2010
(r) MSC Guidelines for the Use of Flammable Liquid & Gas Storage Cabinets, Procedure Number SOLAS-05
(s) Cruise Vessel Security and Safety Act (CVSSA) of 2010; Implementation of Training Standards and Curricula, COMDT (CG-543) Policy Letter 11-10
(t) Cruise Vessel Security and Safety Act (CVSSA) of 2010 Implementation Procedures, COMDT (CG-543) Policy Letter 11-09
(u) Guide to Maritime Security and the International Ship and Port Facility Security (ISPS) Code, International Maritime Organization (IMO), 2012 Edition
(v) Adoption of the International Code for Fire Safety Systems (FSS) Code, Annex 6, Resolution MSC 98(73) (as amended)
(w) Port State Control Guidance for Examination of Fixed CO_2 Firefighting Systems and Conducting Fire Drills onboard Cruise Ship during Scheduled Examinations, CG-CVC-2, July 2013
(x) International Code for Fire Safety Systems (FSS Code), 2007
(y) Marine Safety Center (MSC) Guidelines for Review of Overhanging Decks, Procedure Number: SOLAS-29
(z) Marine Safety Center (MSC) Guidelines for Protection of Deck Openings in Two Deck Spaces, Procedure Number: SOLAS-13
(aa) The International Regulations for Collisions at Sea 1972 (COLREGs) (series), IMO
(bb) United States Coast Guard Navigation Rules and Regulations Handbook (series)
(cc) Environmental Inspection Checklist; Addendum to Foreign Passenger Vessel Examination Book, CG-840, Navigation and Vessel Inspection Circular (NVIC) 04-04
(dd) MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls, MMS Work Instruction, 1 May 2014
(ee) Guidelines for the Inspection of Oily Water Monitor and Separator Systems, COMDT (G-MOC) Policy Letter 04-13 (series)
(ff) Guidance for the Enforcement of MARPOL Annex I during Port State Control Examinations, COMDT (G-PCV) Policy Letter 06-01
(gg) Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships, Resolution MEPC.107 (49)
(hh) Voluntary Compliance with International Sewage Regulations in Annex IV to MARPOL 73/78, Navigation and Vessel Inspection Circular (NVIC) 1-09
(ii) 2012 Guidelines for the Implementation of MARPOL Annex V, Annex 24, Resolution MEPC.219(63)
(jj) Guidelines for Compliance and Enforcement of the Emission Control Areas Established Within the United States Jurisdiction as Designated in MARPOL Annex VI Regulation 14, CG-CVC Policy Letter 12-04
(kk) ECA Job Aid, Domestic and Foreign Vessels, CG-CVC, 24 July 2012

(ll) Guidelines for Ensuring Compliance with Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78; Prevention of Air Pollution from Ships, CG-543 Policy Letter 09-01
(mm) Ballast Water Management for the Control of Aquatic Nuisance Species in the Waters of the United States, Navigation and Vessel Inspection Circular (NVIC) 07-04 (series)
(nn) Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010
(oo) Revised Recommendation on Testing of Life-Saving Appliances, Annex 6, Resolution MSC.81(70)
(pp) Marine Information for Safety and Law Enforcement (MISLE) User Guide Handbook (series)
(qq) Rights of Appeal, 46 CFR Part 1, Subpart 1.03

1. PURPOSE. To provide Foreign Passenger Vessel Examiners (FPVE) with Coast Guard tactics, techniques, and procedures (CGTTP) on Foreign Passenger Vessel (FPV) Initial Certificate of Compliance (COC) Exams.

2. ACTION. This CGTTP publication applies to FPVE conducting initial FPV COC exams. Internet release is authorized.

3. CGTTP AFFECTED. This publication supersedes the Foreign Passenger Vessel (FPV) Initial Certificate of Compliance (COC) Exam Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.5.

4. DISCUSSION. Foreign flag passenger vessels arriving in the United States that embark passengers for the first time or make an initial U.S. port call while carrying U.S. citizens as passengers, must participate in the Initial Certificate of Compliance (COC) process. Vessels returning to service after a prolonged absence from the United States must also participate in the initial COC exam process. This publication provides the step-by-step guidance to perform the many tasks involved with conducting the initial COC examinations of FPV's.

   This tactics, techniques, and procedures (TTP) publication was authored and validated by accomplished performers and subject matter experts in the field. TTP publications adhere to a life-cycle maintenance periodicity unless triggered by other revision requirements.

5. DISCLAIMER. This TTP publication is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide guidance for Coast Guard personnel and is not intended to, nor does it, impose legally binding requirements on any party outside the Coast Guard.

6. CHANGES. This TTP publication uses Adobe Acrobat stamps to indicate revisions. Corrections to meet publication standards may result in a change to page numbering and formatting from previous versions. For each revision listed below, there is a stamp in the left margin next to the section containing a revision.

    1. LOP:

        a. Reference (a) added.

        b. References updated.

    2. Chapter 1: Introduction:

        a. Added Subsections A.2 through A.6 to align with TTP standards.

    3. Chapter 4: Preparing for the Initial COC Exam:

        a. Section A: Preparing for the Initial COC Exam: Updated language in Note.

    4. Chapter 5: Ship's Documents:

        a. A.1.b. Certificates: Updated list with correct certificate names.

        b. A.3. Equivalences or Alternative Arrangements: Added subsection.

    5. Chapter 6: General:

        a. A.1.a. Impact of Furnishings in Escape Routes: Updated language.

        b. A.1.c. Stairways and Stairway landings: Updated bulleted list.

        c. B.3. Saunas: Added final bullet about timer.

        d. B.6. Backstage Areas: Added note.

        e. B.10. Paint Lockers: Updated language in bulleted list.

    6. Chapter 8: Firefighting:

        a. A.3. Fire Patrol: Updated note above.

        b. A.8. International Shore Connection: Added sub-section.

        c. B.2.b. High Pressure Water Mist Pumps: Added language for system pressure.

        d. B.2.b. High Pressure Water Mist Pumps: Added language about fire main system.

        e. B.2.c. Fire Pumps: Added language to last bullet for pressure.

        f. B.2.f. Local Application Section Valve Tests: Added section.

        g. E.1. Smoke Extraction System: Updated language in sub-section.

        h. E.2. Automation Test of Smoke Extraction System: Updated language.

        i. E.2.a. Function Test of Smoke Extraction System: Updated language.

7. Chapter 9: Bridge Safety and Navigation Equipment:
   a. A.1. Introduction: Updated language in note.
   b. A.4. Radar and Navigation Systems: Updated language.
   c. A.5. Electronic Chart Display and Information: Updated language.
   d. A.6. Long Range Identification Tracking: Updated language.
   e. A.8. Vessel Publications and Charts: Updated language.
   f. A.9. Other Systems on Bridge: Updated bulleted list.
   g. A.12. Global Maritime Distress and Safety System: Added sub-section.
8. Chapter 10: Environmental:
   a. A.1.a: Updated sub-section heading.
   b. A.1.c, d, e, and f: Added language referring to reference (cc).
   c. A.1.d. Section C3 Black Water: Added bullets and sub-bullets to list.
   d. C.2.b. Bilge Pumps: Added bullet on how to verify space during an emergency situation.
9. Chapter 11: Machinery Systems:
   a. A.1. Main Propulsion Engines: Updated language in bulleted list.
   b. A.4.b. Machinery Spaces Ventilation: Updated language in bulleted list.
   c. A.5. Emergency Diesel Generator: Added this subsection and following subsection A.5.a.
   d. A.6. Transitional Power: Added this subsection and following subsection A.6.a.
   e. B.1.b. Test Procedure: Updated language in bulleted list.
10. Chapter 12: Vessel Stability and Watertight Integrity:
   a. A.2. Counter Flooding Devices: Updated Note.
   b. A.5. Semi-Watertight Doors: Updated language in sub-bullet.
11. Chapter 16: Post Examination:
   a. A.2. Post Initial COC Overseas Exam: Replaced language on last bullet.
   b. A.3. Completing the Initial COC Exam: Updated notes and bullets within this section.
   c. A.4. Data Entry: Updated intro sentence.

7. DISTRIBUTION. U.S. Coast Guard Force Readiness Command (FORCECOM) Training Division (FC-T) posts an electronic version of this TTP publication to the CGTTP Library on CGPortal. In CGPortal, navigate to the CGTTP Library by selecting **Training & Education**, then select the **TACTICS, TECHNIQUES, AND PROCEDURES** link. FC-T does not provide paper distribution of this publication.

8. USCG FORMS. The USCG electronic forms referenced in this publication are available on the CGPortal website.

9. REQUEST FOR CHANGES. Field feedback regarding this TTP publication, or any other located in the CGTTP Library, may be provided via email to: D05-SG-M-FORCECOM-TPTC-PRODUCTFEEDBACK@uscg.mil.

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By Direction of Chief,
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Chapter 1: Introduction

Introduction

Per reference (a), Development System and Standards Tactics, Techniques, and Procedures (TTP), CGTTP 1-01 (series), *"CGTTP is NOT policy and is not used to replace or fix policy gaps."*

This chapter provides an overview for initial certificate of compliance (COC) exams on foreign passenger vessels (FPVs) per reference (b), USCG Marine Safety Manual, Volume. II: Materiel Inspection, COMDTINST M16000.7 (series). It also defines the use of notes, cautions, and warnings in tactics, techniques, and procedures (TTP) publications.

In This Chapter

This chapter contains the following sections:

Section A: Introduction

A.1. Introduction

Per reference (b), USCG Marine Safety Manual, Volume. II: Materiel Inspection, COMDTINST M16000.7 (series), foreign flagged passenger vessels arriving in the U.S. that embark passengers for the first time or make an initial U.S. port call while carrying U.S. citizens as passengers, must participate in the initial COC exam process. Vessels returning to service after a prolonged absence from the U.S. must also participate in the initial COC exam process.

A.1.a. Applicability

Reference (b) requires plan review and inspection during the initial COC exam of certain foreign passenger vessels. This requirement meets the obligations specified in Section 3505: Prevention of Departure of reference (c), Shipping, 46 United States Code (U.S.C.), and reference (d), SOLAS: Consolidated Text of the International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1988: Articles, Annexes and Certificates (Incorporating all amendments in effect from 1 July 2014), International Maritime Organization (IMO). Normally, the Coast Guard does not "examine" every item listed in this publication or the Foreign Passenger Vessel Examiners (FPVE) Job Aid during every initial COC examination. Examiners can spot check that vessels and crews comply with international conventions and applicable U.S. laws.

Perform initial COC exam related plan review and inspection for the following vessels:

- New or existing vessels intending to embark passengers for the first time from a U.S. port.
- New or existing vessels that intend to carry U.S. citizens as passengers and make port calls at U.S. ports for the first time.
- Existing vessels having undergone a modification or alteration of a "major character" as defined by reference (d).
- Existing vessels that have undergone a modification or alteration, or a change of use or categorization of existing spaces that affects required structural fire protection or means of egress. In such cases, the Coast Guard limits initial COC exam plan review and related examination to the new arrangements and examines existing arrangements per reference (b).
- Existing vessels returning to service in the U.S. more than one year after the annual Certificate of Compliance, Form CG-3585 expired and more than 5 years since the Coast Guard Marine Safety Center (MSC) completed the vessel plan review. The vessel owner or operator must

completely identify all modifications or alterations made to the vessel since the initial plan review. The Coast Guard requires initial COC exam plan review and inspection for any modification or alteration made to the vessel that materially alters structural fire protection or means of egress and examines existing arrangements as described in reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series).

- Existing vessels if selected by Coast Guard Office of Vessel Activities, COMDT (CG-CVC).

Revision

A.2. Scope

The scope of this TTP publication begins when an FPV is scheduled for an initial exam and ends once the exam is completed. TTP guidance focuses on conducting, assessing, and documenting the exam results.

Revision

A.3. Target Audience

The primary audience for this TTP publication are port state control officers (PSCOs) who conduct FPV exams. The intent of this publication is to enhance reference (e), U.S. Coast Guard Foreign Passenger Vessel Examiner (FPVE) Port State Control Officer Performance and Qualification Standard, MPS-PWS-TCY-FPVE (series), and is focused on the exam tasks.

Revision

A.4. Economy of References

The titles of the following references have been abbreviated in this TTP publication from this point forward:

- Reference (d), SOLAS: Consolidated Text of the International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1988: Articles, Annexes and Certificates (Incorporating all amendments in effect from 1 July 2014), International Maritime Organization (IMO), is listed as:
  - Reference (d), SOLAS.
- Reference (f), International Convention of Standards of Training, Certification and Watchkeeping for Seafarers (STCW), Including 2010 Manila Amendments, STCW Convention and STCW Code, 2011 Edition, is listed as:
  - Reference (f), STCW.
- Reference (g), The International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78), is listed as:
  - Reference (g), MARPOL.

Revision

A.5. Registered Trademark Disclaimer

The use of registered trademarks in this TTP publication is not an endorsement of these products or companies by the USCG, the Department of Homeland Security, or the Federal Government. This TTP publication has not been prepared, approved, or licensed by any entity that created or produced products referenced herein. Therefore, any use of third-party logos or trademarks is non-commercial in nature and constitutes a nominative fair use.

Revision

A.6. Best Practice

Throughout this TTP publication, the term “best practice” is defined as an innovative or modified practice that results in an improved or more effective response that could merit adoption by other units, platforms, or commands.

Section B: Notes, Cautions, and Warnings

B.1. Overview The following definitions apply to notes, cautions, and warnings found in TTP publications.

NOTE: **An emphasized statement, procedure, or technique.**

CAUTION: **A procedure, technique, or action that, if not followed, carries the risk of equipment damage.**

WARNING: ***A procedure, technique, or action that, if not followed, carries the risk of injury or loss of life.***

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Chapter 2:
Concept and Plan Review

Introduction

This chapter discusses the steps required for the completion of an initial COC exam.

In This Chapter

This chapter contains the following sections:

Section A: Concept Review

A.1. Identify Design Issues

Examiners conduct concept reviews for novel ship arrangements or unique design features involving interpretations of reference (d), SOLAS, by the vessel's Classification Society or Flag Administration. MSC provides this review as a service to identify and address how novel arrangements and unique design features can affect overall vessel compliance with international convention requirements. Unique designs include alternative designs and arrangements addressed by reference (d), equivalencies, or exemptions from existing regulations. This MSC review addresses specific design concepts or ideas that could create delays if discovered during the normal course of plan review.

The concept review does not approve the conceptual drawings, but accepts specific conceptual details. The submitter integrates these conceptual details into final design drawings and submits these as part of the plan review process. MSC encourages submitters to request concept review as early as possible during the design process to facilitate follow-on plan review and vessel examination.

Contact the MSC via email (msc@uscg.mil) for additional information on submittals, correspondence, and meetings relating to concept review.

NOTE: **See reference (b), USCG Marine Safety Manual, Volume. II: Materiel Inspection, COMDTINST M16000.7 (series), for additional details concerning concept review.**

Section B: Plan Review

B.1. Conduct Review of Vessel Plans as Built

Owners submit approved vessel plans to MSC to review for compliance with conventions in reference (d), SOLAS. The plans should reflect the vessel's "as-built" condition, and the vessels' Flag Administration or authorized Recognized Organization (RO) should approve.

Per reference (b), USCG Marine Safety Manual, Volume. II: Materiel Inspection, COMDTINST M16000.7 (series), vessels returning to service that require a COC must provide satisfactory documentation to the MSC that details any/all modifications since initial plan review.

For additional information on submitting plans, visit the MSC Web site; select **Vessel Standards** from the list on the left side of the page; and select **Marine Safety Center** from the middle of the page.

NOTE: **See reference (b) for additional details on plan review.**

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Chapter 3:
Structural Fire Protection (SFP) Examination

Introduction This chapter discusses the process of completing the structural fire protection (SFP) examination portion of the initial COC.

In This Chapter This chapter contains the following sections:

Section A: General

A.1.

Introduction

Normally, the examiner conducts the SFP examination during construction or a lay-up to examine SFP not readily accessible on an operating vessel. For vessels under construction or undergoing extensive modifications, the SFP exam occurs after plan review, but several months before the initial COC examination. For vessels already in operation, examiners can conduct the SFP examinations during the initial COC exam.

In either case, the examiner and vessel representative develop SFP examination areas. Choosing these areas reflects the overall SFP design and construction, even though the USCG only spot checks the overall SFP installation aboard.

NOTE: **For vessels already in operation, the Coast Guard performs a modified SFP examination during the initial COC exam. Examiners might need certain ceilings and/or linings removed to expose SFP installations in areas of limited visual inspection.**

NOTE: **Bring approved SFP plans (including methods) and any necessary material certificates (combustible materials, windows, and carpets).**

Section B: SFP Elements

B.1. Fire Insulation

Verify workmanship, thickness, heat bridges, cable, pipe and duct penetrations, windows, and fire doors at selected locations throughout the vessel. Pay particular attention to the following areas:

- Main vertical zone boundaries.
- Muster stations and category four escape routes.
- Escape stairs.
- Vessel side-shell adjacent to lifeboat and liferaft deployment routes.
- Galleys, laundry, pantries, and control stations.
- Lifts and trunks.
- Main machinery space and casing.
- Corridors in cabin areas/continuous ceilings.
- Fire dampers.

B.2 Enclosed Escape Stairway

Verify the following:

- Structural fire protection installation at selected locations.
- Bulkhead penetrations.
- Ventilation (see Chapter 3: SFP Examination, Section B.5. Fire and Smoke Damper and Ventilation Arrangements).
- Unauthorized spaces do not open directly to stair.

B.3 Escape Routes

Verify the following escape routes at selected locations:

- Not constructed with dead-end corridors.
- Two means of escape where required.
- Effectiveness of low location lighting (LLL) or photo-luminescent strip indicators provided along escape routes if fitted at the time of SFP examination.

B.4 Fire Boundary Penetrations

At selected locations, verify maintenance of "A" class boundaries at penetrations, pipes, trunks, and ducts, and that corridor bulkheads extend from deck to deck unless permitted to meet the requirements of reference (d), SOLAS.

B.5 Fire and Smoke damper and Ventilation Arrangements	Verify the following at selected locations: • Location of controls and proper operation. • Construction of ventilation ducting and bulkhead penetrations and filters, especially in the laundries.
B.6 Draft Stops	Verify horizontal and vertical draft stops at selected locations for workmanship and location (at not more than 14 meter intervals, both longitudinally and athwart ships).
B.7 Space Categorization	Verify categorization of all spaces per the SFP drawings.
B.8 Smoke Detector and Sprinkler Arrangements	Verify fire detection and suppression systems installed per reference (d). This examination verifies the ship's compliance in lifeboat and liferaft deployment routes.

NOTE: **See reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series), for a list of required plans and specifications provided by the shipyard or owner to complete the SFP examination.**

Chapter 4:
Preparing for the Initial COC Exam

Introduction

This chapter discusses the various requirements and steps to take before starting the initial COC exam.

In This Chapter

This chapter contains the following sections:

Section A: Preparing for the Initial COC Exam

A.1. Introduction

Do not begin an initial COC exam until the Administration (or RO acting on behalf of the Administration) issues the SOLAS Passenger Ship Safety Certificate (PSSC) or will issue it before completing the initial COC exam. The officer in charge, marine inspections (OCMIs) can relax this requirement when the Flag Administration expects to issue the PSSC after the examination.

Additionally, the initial COC exam occurs only after the Coast Guard completes plan review and the MSC provides appropriate comments and stamped plans to the local OCMI.

For further details on the preparation for an initial COC exam, refer to:

- Reference (b), USCG Marine Safety Manual, Vol. II: Materiel Inspection, COMDTINST M16000.7 (series).
- Reference (h), Scheduling Foreign Vessel Examinations, MPS-PR-SEC-02.
- Reference (i), Preparing for Inspections and Examinations, MPS-PR-SEC-04.

For further details on the flow of the initial COC, refer to reference (j), Conducting Foreign Vessel Examinations, MPS-PR-SEC-06 and the FPVE initial COC process guide (located on the Cruise Ship National Center of Expertise (CSNCOE) Web site) used by each team member.

If less than one year has elapsed since an initial exam was initiated overseas and vessel conditions have not changed, focus the examination on fire and abandon ship drills, any outstanding discrepancies or items not inspected during the overseas portion of the examination, and unresolved plan review issues.

Revision

NOTE: **DO NOT retest items verified during the overseas portion unless there are clear grounds that lead an examiner to suspect a failure of the system.**

If it has been more than one year and less than two since the ICOC exam began, follow the scope of an annual exam. Do not retest transitional power and smoke extraction systems.

NOTE: **The Coast Guard permits up to two years between the overseas portion and its conclusion if there are no modifications to the vessel's SFP or means of egress. If more than two years have passed since the beginning of the initial COC exam, the USCG will complete a new initial COC exam at the first U.S. embarkation port.**

NOTE: **Capture work list items needing correction before issuing the COC. This is the only time to use a work list to capture items found during an exam. After issuing the COC, enter all remaining deficiencies on Coast Guard Port State Control Report of Inspection, Form B (CG-5437B).**

NOTE: **USCG personnel conduct FPV examinations to ensure proper, prescribed operation of required equipment and systems. Only authorized vessel crewmembers and/or authorized shipyard personnel activate equipment and systems.**

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Chapter 5:
Ship's Documents

Introduction

This chapter discusses collection and review of all pertinent ship's documents for validity and proper certification and endorsement.

In This Chapter

This chapter contains the following sections:

Section A: Ship's Documents

A.1. Vessel Documents

Per reference (k), Revised List of Certificates and Documents Required to Be Carried on Board Ships, International Maritime Organization (IMO), MSC.1/Circ. 1409, verify the following vessel documents:

- Statutory documents.
- Plans.
- Records.
- Logs.
- Crew licenses and endorsements.

NOTE: **Typically, the overseas portion of initial COC examinations does not verify documents and crew licenses for various reasons (such as incomplete document issue before vessel delivery; not all licensed crew is aboard). Add document and license verification to the work list for first U.S. port verification.**

A.1.a. Licenses and/or Flag State Endorsements

Verify the following:

- Number of licensed officers meets the Safe Manning Certificate.
- Flag state endorsement certificate has license certificate numbers.
- Documents are current.
- Level of competency matches or exceeds job done by the individual.
- Crew medical certificates.
- International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) basic safety training.
- Mandatory minimum requirements for specific passenger ship training per reference (f), STCW.
- Fast rescue boat training records for crewmember assigned to rescue boats meeting fast rescue boat specifications or if the vessel has a fast rescue boat aboard per reference (d), SOLAS.
- Crowd management training (personnel designated on muster lists to assist passengers in emergencies).
- Safety training for personnel providing direct service to passengers in passenger spaces.

- Crisis management and human behavior training for:
  - Masters.
  - Chief engineer officers.
  - Chief mates.
  - Second engineer officers.
  - Any person responsible for passenger safety in emergencies.
- Passenger safety, cargo safety, and hull integrity training for:
  - Masters.
  - Chief mates.
  - Chief engineer officers.
  - Second engineer officers.
  - Persons responsible for embarking and disembarking passengers, for loading, discharging, or securing cargo, or for the closing hull openings aboard roll-on/roll-off (RO-RO) passenger ships.

Revision A.1.b. Certificates

Verify the following:

- Certificate of Registry.
- Classification Document.
- International Tonnage Certificate (ITC).
- Passenger Ship Safety Certificate (PSSC).
- Passenger Ship Safety Certificate, Record of Equipment (PSSC Form P).
- International Load Line Certificate.
- International Safety Management Code (ISM) Copy of Document of Compliance.
- ISM Safety Management Certificate (SMC).
- Minimum Safe Manning Certificate.
- International Oil Pollution Prevention Certificate (IOPP).
- International Air Pollution Prevention Certificate (IAPP).
- Engine IAPP (EIAPP) (for each engine) and EIAPP Supplements.
- International Ship Security Certificate (ISSC).
- Continuous Synopsis Record (CSR).
- International Anti-Fouling System Certificate.

- Lifeboat/Tender Safety Equipment Certificate.
- Exemption Certificate (PSSC), if applicable.
- International Energy Efficiency Certificate (IEEC).
- High-Speed Craft Safety Certificate, as applicable.
- Permit to Operate High-Speed Craft, as applicable.

NOTE:

Per reference (l), Guidelines for the Coast Guard Evaluations of Compliance with the U.S. Environmental Protection Agency's (EPA) Vessel General Permit (VGP) for Discharges Incidental to the Normal Operation of Vessels, COMDT (CG-543) Policy Letter 11-01, the vessel general permit (VGP) only applies while in U.S. waters, 3 miles from the baseline.

A.2. Log Books, Plans, and Other Records

Verify the following:

- Garbage management plan.
- Training logs/drill records per vessel/company specific International Convention for the Safety of Life at Sea (SOLAS) training manual.
- Safety Management System.
- Decision Support System for masters.
- Shipboard oil pollution emergency plan (SOPEP) approval letter.
- Non-tank vessel response plan (NTVRP) approval letter.
- Ballast water management (BWM) plan and records (see Chapter 10: Environmental, Section C: Ballast and Bilge System for more details).
- Search and Rescue (SAR) for Cooperation Plan.
- Bunker delivery notes/fuel sample aboard (as applicable).
- List of limitations per reference (d), SOLAS.
- Damage control plans, stability booklets, and approved computer program.
- Oil record book.
- Pre-arrival/pre-departure check Part 164 Navigation Safety Regulations of reference (m), Navigation and Navigable Waters, 33 CFR.
- Captain of the Port (COTP) waiver per reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series) (if applicable for the exam port COTP zone).

- Shipboard energy efficiency management plan (SEEMP) (if applicable).

NOTE:

The SEEMP is not subject to approval by the Flag Administration or Classification Society; however, per the IEEC, it must be aboard. An incomplete vessel IAPP renewal or intermediate survey could delay IEEC issue.

Revision

A.3. Equivalencies or Alternative Arrangements

Verify any equivalences or alternative arrangements to SOLAS requirements are approved by the flag state per:

- Chapter II-1/55.
- Chapter II-2/17.
- Chapter III/38.

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Chapter 6:
General

Introduction

This chapter covers general requirements on means of escape, signage, space requirements, and the applicable International Labor Organization (ILO)-147. As you conduct the initial COC exam, evaluate these elements in conjunction with all other elements in this publication**.** Pay particular attention to means of egress and associated flow, including escape signage and lighting together. Identify space categorization "as built," and verify proper space use. Remain cognizant of ILO-147 requirements while examining hospitals and crew areas. This chapter calls out specific areas on the vessel, but practice due diligence in all areas of the vessel to verify substantive compliance.

In This Chapter

This chapter contains the following sections:

Section A: Means of Escape and Signage

A.1. Means of Escape/Escape Signage

Purpose is to verify escape routes and means of escape (stairs, corridors, doors, and openings) throughout the vessel and relevant escape signage (EXIT, EMERGENCY EXIT, ESCAPE, etc.).

NOTE: **Examiners can conduct a large portion of this verification during the emergency source of power exam (transitional power test).**

Revision

A.1.a. Impact of Furnishings in Escape Routes

Verify there are no obstructions along escape routes (stairs, corridors, doors, openings, and escape routes are free of storage).

A.1.b. Escape Trunks

Verify the following:

- Doors to escape trunks operate.
- Able to open and unlock from the inside.

Revision

A.1.c. Stairways and Stairway Landings

Verify the following:

- Only located within the perimeter of stairway enclosures:
  - Public toilets.
  - Lockers with non-combustible materials.
  - Open information counters.
  - Fixed seating limited to six.
- Stairway enclosures in accommodation and service spaces have direct access only from:
  - Public spaces.
  - Corridors.
  - Lifts.
  - Public toilets.
  - Special category spaces.
  - Open RO-RO spaces to which passengers have access.
- Stair towers correctly enclosed by appropriate fire doors.

A.1.d. Evacuation Routes	Refer to guidelines for evacuation routes per reference (d), SOLAS and reference (n), Marine Safety Center (MSC) Guidelines for Review of Locks and Latches in Doors in Escape Paths, Procedure Number: SOLAS-49. Verify the following: • Enclosed protected access to embarkation deck. • Spaces have two means of escape and have no dead end corridors. • Air handling space, offices, workshops, and storerooms for escape compliance.
A.2. Vessel Escape Signage	Verify the following: • Emergency exits properly marked. • Signage is correct, adequate, and per the escape plan.
A.3. Muster/ Assembly Stations Signage	This examination verifies size, location, signage and emergency lights at each station (emergency lighting can be verified during emergency source of power exam). Ensure spaces are adequate in size so passengers can hear and see embarkation and emergency procedures presented by crewmembers. Per reference (d), SOLAS muster/assembly stations shall be near, and permit ready passenger access to, the embarkation stations unless in the same location. Verify the following: • Is designated and assigned. • Has adequate lighting (normal and emergency conditions). • Appropriate IMO symbols at each entrance. • Has proper location of exits towards lifeboats/liferafts (indoor spaces only). • General alarm public address (PA) system is audible (typically verified during emergency power exam). • Conspicuous posting of lifejacket donning instructions. • No obstructions reducing the available space for actual mustering. • Muster station leader is assigned. • Muster station second in command is assigned. • Crew knows which lifeboats to escort passengers to. • Muster lists and emergency instructions.

- Available for each person.
- Posted in conspicuous places.
- Written in a language crew understands.
- Lists crewmember duties.

A.4. Room-in-Room Construction

Verify the following per reference (o), Marine Safety Center (MSC) Guidelines for Review of Room-In-Room Construction, Procedure Number: SOLAS-25:

- Has means of immediate and clear notification of a fire in the surrounding space.
- Proper space categorization.

A.5. Low Location Lighting (LLL)

Refer to guidelines for evaluating LLL per reference (p), Guidelines for the Evaluation, Testing, and Application of Low-Location Lighting on Passenger Ships, International Maritime Organization (IMO) Assembly Resolution A.752(18).

Verify the following:

NOTE: **LLL is typically verified during emergency source of power test.**

- Proper placement and arrangement of LLL per approved plan and regulation requirements.
- Leads to escape route.
- Leads to door handle in way of escape route.
- Located on both sides of corridors greater than 2 meters wide.

A.6. Adequacy of Photo luminescent Tape

Verify the following:

- Low location lighting or photo luminescent strips not more than 300 millimeters above the deck.
- Per reference (p), conducted test of photo luminescent tape within 5 years if not new construction.

Section B: Space Requirements

NOTE: **During spot check, examine working areas where the crew congregates for smoking breaks (such as the mooring decks) for fire hazards including oils, oily rags, and combustibles.**

B.1. Laundry Room

Verify this area is protected and safe from fire hazards and the crew understands the elevated fire risk of this space.

- Ventilation system and ducts are clean and clear of potential fire hazards.
- Smoke detectors, sprinkler or water mist heads, and fire extinguishers are present and/or not obstructed.
- No stowage behind machinery where there could be fire hazards.
- Egress paths are clear and maintained.
- Adequate cleaning and maintenance program in place for ventilation and lint traps.

B.2. Public Spaces

Verify access to means of escape and placement/operation of emergency/fire equipment.

- Clearly indicated escape signage.
- Egress paths are clear and maintained.
- PA system and general alarm is audible or overrides all other sound systems.

Revision

B.3. Saunas

Verify the following:

- Combustible material is stowed at least 500 millimeters from hot surface or protected from hot surface.
- Sauna door opens outward.
- Electrically heated ovens have a proper operating timer.
- Timer operates properly.

B.4. Cabins and Balconies

Verify the following:

- Escape instructions are marked on back of door and oriented in a clear and non-confusing way.
- Lifejacket symbols (if lifejackets kept in cabins) are clearly visible and lifejackets are stowed in same location.
- Random samplings of smoke detectors are functional.
- Balconies are fitted with fire detection and fire suppression systems if they contain combustible furniture.
- Balcony partition construction is non-combustible material and can be opened or removed in emergencies.

NOTE: **If furniture is non-combustible, see approval certificate (if in question).**

- PA system is audible from cabin and can be heard above ambient noise upon system activation.
- Peep holes, time sensitive latches, and security guide per reference (q), Cruise Vessel Security and Safety Act (CVSSA) of 2010.

B.5. Theater Areas

Verify the following:

- Escape routes are clearly marked.
- Egress paths are clear and maintained.
- PA system is audible from space and eliminates ambient noise upon system activation.

B.6. Backstage Areas

Verify the following:

- Egress paths are clear and maintained.
- All materials including low flame spread curtains and drapes are approved (if in question).
- Adequate emergency lighting.
- Proper stowage of fireworks and pyrotechnics per Flag State approval.
- No stowage of flammable material unless properly stowed in a fire locker for daily use per reference (r), MSC Guidelines for the Use of Flammable Liquid & Gas Storage Cabinets, Procedure Number SOLAS-05.

Revision

NOTE: **The definition of "daily use" when considering flammable items stowed in a flammable locker, but not in a category 14 space, cannot be found in reference (d), SOLAS. USCG defines it as an amount as prescribed in the ship's SMS. Ultimately, the RO can accept it or ask to re-evaluate the quantity.**

- No stowage of combustibles unless stowed in a designated space with proper categorization.
- No dangerous electrical connections.

B.7. Galley

Verify the following:

- No improper stowage combustible/flammable materials stowed inside space.
- Protected by an appropriate fire extinguishing arrangement.
- No improper room-in-room arrangements.
  - If no audible alarm in space, verify glass is not obstructed.
  - PA system operational and audible inside the galley (if delivery system is located outside the galley, ensure it is audible inside the galley space).

B.8. Photo Lab

Verify for the following:

- No improper stowage of combustible/flammable materials inside space.

B.9. Garbage Room

Verify the following:

- No improper stowage of combustible/flammable materials inside space.
- Use of containers constructed of combustible materials in galleys, pantries, bars, garbage handling or storage spaces and incinerator rooms if used purely for carrying wet waste, glass bottles and metal cans, and are suitably marked.
- Protected by an appropriate fire extinguishing arrangement.

Revision

B.10. Paint Lockers

Verify the following:

- Protected by an appropriate fire extinguishing arrangement manually operable outside the space.
- Electrical installations are explosion proof.
- Proper ventilation is present.
- Category 14 space.

B.11. Air Conditioning and Ventilation Spaces

Verify the following:

- Unblocked means of escape with proper escape signage.
- No improper stowage of combustible/flammable materials inside space.

Chapter 7:
Security Systems

Introduction This chapter discusses the evaluation of a vessel's security program.

In This Chapter This chapter contains the following sections:

Section A: Vessel Security Systems

A.1. Vessel Security Measures

The following sections encompass the evaluation of a vessel's security program. In most cases, the ship's security officer (SSO) is required during this portion of the exam.

NOTE: **Ship's crew might not be present during the initial COC exam if conducted in the shipyard. If ship's crew is unavailable to demonstrate SSO duties during the overseas portion of the exam, it must be verified at the first port.**

A.2. Cruise Vessel Security and Safety Act (CVSSA) Implementation

Verify by spot check reference (q), Cruise Vessel Security and Safety Act (CVSSA) of 2010, requirements:

- Peep holes/visual means of identification.
- Rail heights on passenger cabin balconies and all open air decks to which passengers have access.

NOTE: **Measure rail heights vertically from the top of the uppermost rail to the adjacent deck surface on the passenger side of the railing. Lower heights are acceptable if the 42 inch height would interfere with other special arrangements (such as boarding areas around lifeboats, etc.). Non-deck edge guard rails, such as on stairways, are not subject to this special height requirement.**

- Passenger cabins are fitted with security latches and time sensitive keys (for vessels built after 27 July 2010).
- A Criminal Activity Prevention and Response Guide also known as "Security Guide" is available for each passenger.
- Passenger cabins have embassy and consulate location information readily accessible.
- The vessel has a policy for confidential sexual assault examinations

NOTE: **There must be no release of patient records without the patient's prior knowledge and approval in writing or, if patient is unable to provide, by the patient's next of kin.**

- Vessel's procedures and restrictions regarding crewmembers access to passenger staterooms and permissible access times.
- Vessel maintains a log of crimes and incidents.

NOTE: **Task is only to verify vessel has a log aboard to document crimes and incidents.**

- At least one crewmember has crime scene preservation training per reference (s), Cruise Vessel Security and Safety Act (CVSSA) of 2010; Implementation of Training Standards and Curricula, COMDT (CG-543) Policy Letter 11-10.

A.2.a. CVSSA: Hospital Spaces

Verify the following elements at the vessel's medical center to ensure compliance with sexual assault medical response per reference (t), Cruise Vessel Security and Safety Act (CVSSA) of 2010 Implementation Procedures, COMDT (CG-543) Policy Letter 11-09:

- Does the ship maintain an adequate and up-to-date supply of anti-retroviral medications and other medications designed to prevent sexual transmitted diseases?
- Does the ship maintain equipment and materials for performing a medical examination in sexual assault cases to evaluate the patient for trauma, provide medical care, and preserve medical evidence?
- Does the vessel's medical staff comply with the credentialing and experience outlined in reference (t).
- Does the ship prepare, provide to the patient, and maintain written documentation of examination findings with patient signature?
- Patient has access to a free, immediate, and private telephone and Internet accessible computer terminal to confidentially contact local law enforcement, the FBI, the USCG, the nearest U.S. consulate or embassy, and the National Sexual Assault Hotline program.

A.3. International Ship & Port Facility Security Code (ISPS)/ Maritime Transportation Security Act (MTSA) Requirements

Per reference (u), Guide to Maritime Security and the International Ship and Port Facility Security (ISPS) Code, International Maritime Organization (IMO), 2012 Edition, and Part 104 Maritime Security: Vessels per reference (m), Navigation and Navigable Waters, 33 CFR, verify vessel has access control and monitoring in place including:

- Access control at opened side shell doors.
- Interface between shore and ship.
- Crew knowledge regarding vessel security.
- Measures in effect to prevent weapons, dangerous substances, and devices from getting aboard.
- Screening of passengers, crew, and associated luggage.
- Screening of stevedores.
- Cargo and supply screening.
- Security communications.
- Gangway watch checks for government issued identification.

NOTE: **Never surrender government issued identification regardless of vessel policy.**

A.4. Security Aspects

Verify the vessel's security program per:

- Reference (d), SOLAS.
- Reference (u), Guide to Maritime Security and the International Ship and Port Facility Security (ISPS) Code, International Maritime Organization (IMO), 2012 Edition.
- Part 104 Maritime Security: Vessels per reference (m), Navigation and Navigable Waters, 33 CFR and, as applicable for the vessel as outlined in
- Reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series).

Pay particular attention to:

- Performance of ship security duties.
- Access control to the vessel.
- Embarkation control of persons and their effects.
- Authorized access to and monitoring of restricted areas.
- Monitoring deck areas and areas adjacent to the ship.
- Supervision of cargo and ship's stores handling.
- Ready availability of security communications.

A.4.a. Records

Verify the following:

- Protection of records against unauthorized access.
- Declaration of Security (DOS).

Spot check the following:

- SSO by asking relevant questions about the security personnel, procedures, and training.
- A crewmember with security responsibilities by asking them questions about the security personnel and procedures and training.

A.5. Access to Vessel Restricted Areas

Verify the following:

- Authorized access to and monitoring of restricted areas.
- Signage is posted.

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Chapter 8: Firefighting

Introduction

This chapter discusses fire protection and the associated systems used to meet firefighting requirements.

In This Chapter

This chapter contains the following sections:

Section A: General

A.1. Fixed Fire Protection System Operating Instructions

Verify the following:

- In common language.
- Easily read under lit conditions.
- Located near the equipment.

A.2. Firefighting Equipment/ Technical Lockers

Verify the following:

- Technical locker inventory conforms to reference (d), SOLAS, and reference (v), Adoption of the International Code for Fire Safety Systems (FSS) Code, Annex 6, Resolution MSC 98(73) (as amended).
- Firefighter's outfit:
  - Two-way portable radio communications.
  - Protective clothing material shields skin from fire's radiated heat, burns, and scalding by steam. The outer surface shall be water-resistant per reference (v).
  - Boots are rubber or other electrically non-conducting material.
  - Rigid helmet provides effective impact protection.
  - Electric safety lamp (hand lantern).
  - Axe with high-voltage insulated handle.
  - Self contained compressed air-operated breathing apparatus capable of functioning for at least 30 minutes. All cylinders are interchangeable.
  - Fireproof lifeline at least 30 meters long and equipped with a snap hook to attach to the apparatus.
- Additional items required in the technical lockers:
  - Spare charges for breathing apparatus.
  - Water fog applicator.
  - Correct number of firefighter's outfits aboard for size of vessel.

Description	Formula	Number
Every ship	+2	2
For every 80 meters or part thereof of the longest deck that carry passengers or service spaces	+2/per 265/80=3.3125 The additional .3125 is considered "or part thereof"	8
Per MVZ, none of which are independent S/C and have (6)(7)(8) and (12)	+2/per MVZ x 6 =	12
	Total =	22

Table 8-1 Firefighter outfit matrix

- All equipment is readily accessible.
- Technical locker markings, lighting available on emergency power.
- Condition of fire extinguishers (see Chapter 8: Firefighting, Section A.6. Portable Fire Extinguishers for details).

Revision

NOTE: **Ensure all items in the locker are stowed ready for immediate use and clearly marked.**

A.3. Fire Patrol

Verify the following:

- Each member is familiar with the vessel's arrangement.
- Fire patrols complete assigned rounds.

NOTE: **When at sea, manning bridge and engine room control spaces shall be per reference (f), STCW. This provides immediate access to communication centers, fire detection/suppression/isolation and associated systems, and passenger and crew alarms.**

NOTE: **Per reference (f), while passengers are aboard, personnel who can promptly and effectively respond to detected smoke and/or fire shall man the bridge and engine room control spaces.**

A.4. Fire Alarms and Detection Systems

Verify by testing proper operation of a representative sample of fire alarms (smoke detectors, heat detectors, and manual call points) throughout vessel. Complete this check by testing fire alarms on each deck for each fire zone.

NOTE: **To speed progress or test more fire alarms, the team takes note of the activated alarms and, at the end of the inspection, compares the list with the control panel printout.**

A.4.a. Heat Detectors

Verify the following:

- Heat detectors activate as prescribed by manufacturer until the detector alarms.
- Detector number.

NOTE: **Local alarm sounding depends upon the vessel's keel date.**

- Number on the alarm panel matches the detector number and location.
- Heat detectors are in good condition.

A.4.b. Smoke Detectors

Verify the following:

- Smoke detectors activate as prescribed by manufacturer until the detector alarms.

NOTE: **Identify detector zone or address.**

- Alarm sounds at the bridge, and detectors might sound locally.
- Room in room configurations have audible alarms if fitted.

NOTE: **If the ship has a zone system, ensure zone detection is active. If the ship has an address for each detector, ensure detector activation identifies the address.**

A.4.c. Manual Call Points

Verify the following:

- Call point activates after inserting test key.
- Call point number.
- Alarm sounded at wheelhouse.
- Number on the alarm panel matches the call point number and location.

A.5. Fire Control Plan

This exam verifies the fire control plan is adequate and consistent with the equipment aboard.

NOTE: **All decks noting equipment placement on the plan matches placement on the vessel. Identify any areas requiring additional equipment placement (following list is not all inclusive).**

Verify the following:

- Fire alarms (manual and automatic).
- Fire stations, fire hydrants, and hoses.
- Fire extinguishers.
- Sprinkler stations, section valves.
- Fire dampers and damper control stations.
- International shore connection.
- Emergency escape breathing devices (EEBD).
- Signage reflects the correct equipment and position on the vessel.
- Plans are posted at embarkation areas, crew accommodations, wheelhouse and engine control room (ECR).
- Each locker, station, and gear is indicated on the fire control plan.

A.6. Portable Fire Extinguishers

Verify the following:

- Ready for use in conspicuous places or proper labels for lockers.
- Fully charged.
- Spare charges provided for first ten extinguishers and 50 percent of the remaining fire extinguishers aboard are capable of being recharged.
- Proper bracket mounted.

A.7. Fire Hydrants

Verify the following:

- Immediate pressure by opening an upper hydrant.
- Markings for fire hydrants.
- Fire stations are equipped with:
  - Fire hose in good condition attached to hydrant on interior stations.
  - Spanner wrench (optional unless hose fitting requires it).

- Hydrant isolation valve.
- Dual purpose nozzle with necessary couplings, (spray/jet type) incorporating a shutoff.

NOTE:

Per reference (d), SOLAS each hose shall have a nozzle and necessary couplings. Fire hoses, with all necessary fittings and tools, shall be ready for use.

Revision

A.8. International Shore Connection

Verify the following:

- Complete with all parts (bolts, nuts, and gaskets).
- Connection located per the vessels' fire control panel.

Section B: Fixed Fire Extinguishing Systems

B.1. Fixed Gaseous Fire Extinguishing Systems

Verify by testing extinguishing system equipment installation and markings. Verify Classification Society test reports are available for review.

WARNING:

Ensure ventilation is on and operating properly for at least 15 minutes before inspection.

Verify the following:

- Ship has maintenance plan for specific firefighting instruction manual (FIM) for maintenance.
- Operation of ventilation before entering space.
- Warning placards in place.
- System diagram is in place and accurate at bottle station.
- Current servicing of bottles and hoses.
- Material condition of equipment.
- Bottles are correctly marked, connected, and secured.
- Release procedures are posted and show proper sequence of events to activate system.
- System operating instructions posted and reflect actual system configuration.

NOTE:

Ensure operating instructions are in English or the official language of the vessel, easily read under existing light conditions, and located near the equipment.

- Spaces covered are adequately marked and equipped with audible alarms.
- Crew knowledge of system operations.
- All means of egress are clear and adequate lighting is available.

NOTE:	**Vessels undergo inspections before leaving the shipyard to ensure removal of all blanks and serviceability of all loop connections. Be alert to alterations that might adversely affect the vessel's structural fire protection.**
NOTE:	**Past examinations have revealed instances of improper system installation. To ensure proper system installation, verify proper installation of operating handles and orientation of stop-check valves.**
NOTE:	**For carbon dioxide (CO_2) system specific requirements, refer to reference (w), Port State Control Guidance for Examination of Fixed CO_2 Firefighting Systems and Conducting Fire Drills onboard Cruise Ship during Scheduled Examinations, CG-CVC-2, July 2013.**
B.1.a. Fixed Foam System	Verify fixed foam system, if equipped, as follows: • Foam analysis report present. • Procedures present at operating station and crew familiar with them.
B.1.b. Galley Equipment and Hood Firefighting Systems	This test verifies fire detection systems in cooking areas are in place, intact, and operational. Verify the following: • System markings and instructions. • Grease traps are installed and clean. • Automatic shut down of ventilation system located close to entrance to the galley. • Automatic closure of lower duct fire dampers. • Audible and visual alarms of fixed fire extinguishing system (CO_2). • Placement of fixed fire suppression system for deep fat fryers.
B.2. Water-Based Fire Suppression System	This test verifies proper operation of water-based fire suppression system, associated section valves, and system alarms. Ensure Administration installation test reports are available for review.

B.2.a. Sprinkler Pump

Verify the following:

NOTE: **Reduce system pressure to activate system.**

- Automatically starts and provides system pressure.
- Pump operation by the ECR, bridge, or the pressure gauge at the section valve.
- Installation of cross connect to fire main system.

B.2.a.(1). All Water Suppression Systems

Verify the following which could impact sprinkler head effectiveness:

- Adequate head distribution throughout vessel.
- Coverage of windows facing embarkation areas by a dedicated sprinkler head (if fitted) per the fire control plan unless new window certified as A-60.
- No obstructions to spray patterns.
- High density water mist heads are not damaged, are the proper color (based on temperature for its usage in the space protected), and filled with the proper amount of liquid (for expanding and breaking when sensing the temperature threshold for fire).

NOTE: **For vessels fitted with traditional sprinkler systems, confirm windows adjacent to embarkation areas are either A-30 or protected by a dedicated sprinkler head. For vessels fitted with a high pressure water mist system, A-0 windows may be used without a dedicated sprinkler head if the system fully protects the interior space.**

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B.2.b. High Pressure Water Mist Pumps

Verify the following:

- System pressure before starting the exam (typically 25-30 bars).
- High pressure water mist pump motors (two pumps per motor) start to operate when pressure drops below 10-15 bars. The high pressure water mist pump motors cycle on one at a time until all primary pump motors start.

NOTE: **Consult with manufacturer and/or electrician to determine/test system alarms and redundancies.**

NOTE: **If a vessel has more than one system, the second system is typically in standby mode. It starts if the primary system cannot maintain system pressure. If there is a failure of any primary pump motors, for example, if a system has six motors, five start with one in standby.**

- Cross connect to fire main system is installed and locked.
- Pressures on nitrogen stored energy (if equipped).
- Automatic solenoid is connected on stored energy bottles.

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B.2.c. Fire Pumps

Verify proper operation of fire pumps (automatic) and that fire main system can provide immediate pressure to all hydrants.

- Number (at least three).
- Seal is not leaking excessively.
- Starts automatically.
- Powered by the emergency switchboard (at least one).
- Fire main is under pressure prior to exam start (typically 8-10 bars).

NOTE: **Opening a fire hydrant or the anchor wash on the vessel drops system pressure.**

- The "topping off" or head make-up pump (if installed) automatically starts upon designated pressure or pressure loss. System pressure returns to normal.
- Secure "topping off" pump and ensure standby fire pump starts automatically/provides appropriate system pressure.
- Operation of remaining two fire pumps by manual start and remote location.

NOTE: **Secure the emergency fire pump from the switchboard, then power it using the emergency switchboard while testing the emergency generator.**

- No excessive leaks from fire pump while operational.

B.2.d. Section and Pre-Action Valves

Verify the following at a section valve station:

- Means to prevent unauthorized operation; for example, a locking device or an addressable alarm sounded in a central control station.
- Legible diagram of the area serviced by the station.
- Valves labeling (for addressability from the navigation center alarm panel).
- System is under pressure (this is static pressure of system).
- Spare heads (provided aboard).

B.2.e. Section and Pre-Action Valve Tests

Verify the following actions:

- Closes the stop valve.
- If a stop valve has an alarm, the alarm works as designed after the valve closure.

NOTE: **Per reference (x), International Code for Fire Safety Systems (FSS Code), 2007, dry sprinkler systems require a pre-action or remotely-activated stop valve. Confirm valve is accessible outside the affected space and can either be operated manually, locally, or remotely.**

- Reduces pressure to section valve through test fitting or open drain valve.
- Opening the valve triggers the flow alarm. Water flow in the pipe.

NOTE: **If bridge cannot verbally confirm activation of the alarm(s) due to ship operations, identify the location of the alarm and type, and request a printout from the bridge later.**

- The system pressure drops to a set pressure and causes the automatic starting of pumps to bring system up to operating pressure.
- Alarms and systems reset to normal operation.

Revision

B.2.f. Local Application Section Valve Tests

Verify the operation of the local application fire extinguishing system section valves in all modes of operations. Test minimum of three sections valves, on per mode of operation:

- Operate section valve by means of local activation.
- Operate section valve by means of remote operation.
- Operate section valve by means of automatic activation (2 sensors).

NOTE: **Only test local application section valves associated with systems required by reference (d), SOLAS.**

B.2.g. Drencher (if equipped)

This test verifies proper operation and coverage of the installed drencher system. The drencher systems typically protect covered mooring decks per reference (y), Marine Safety Center (MSC) Guidelines for Review of Overhanging Decks, Procedure Number: SOLAS-29, and reference (z), Marine Safety Center (MSC) Guidelines for Protection of Deck Openings in Two Deck Spaces, Procedure Number: SOLAS-13.

Verify the following:

- Arrangement of drencher heads.
  - Ensure drencher heads cover areas of greater fire risk.
  - Heads are clear of debris.
- Instructions for use are posted.
- Fire detection systems (smoke, heat, or fire) are functional.
- Control valves are marked and easily accessible without going through protected areas.

Section C: Fire Screen Doors

C.1. Fire Doors (FDs)

This test verifies proper operation of fire screen doors located throughout the vessel. General closing of all doors is conducted in conjunction with the emergency source of power exam.

C.1.a. Hinged Fire Doors

Verify by spot check the following:

- Test group release for fire doors (FDs) or release doors zone by zone. Identify on bridge monitor control panel the identification number of doors.
- Doors are marked with number and for double doors correctly marked "Close this door first" or equipped with an interlock or sequencing bar preventing overlay when both doors in same opening are closed.
- FDs properly self-close and latch when released, especially when the ventilation systems are operating to ensure there is no effect on FD closure.
- Doors are releasable from both sides of the door.
- All hold-back mechanisms connected to a central release. Per reference (d), SOLAS, there shall be no hold-back hooks not connected to a central control station.
- Door closure rates.

C.1.b. Sliding Fire Doors

Verify the following:

- Sliding FDs equipped with safety bar (if installed) does not reopen more than 1 meter when activated.
- Alarm sounds for 5 to 10 seconds before closing when FD activated from the remote location.
- Sliding FDs close properly and are not twisted on their tracks.
- Proper closing of fire screen doors in one main vertical zone activated from central control station. This is typically done during the fire drill.
- Door closure rates.

NOTE: **Use of door gaskets constructed of intumescent materials that expand to fill gaps between the door and the bulkhead are acceptable.**

C.1.c. Rolling Fire Doors	Verify the following: • Alarm sounds for 5 to 10 seconds before closing when FD activated from the remote location. • Rolling fire doors (usually found near open galleys on upper decks) close properly and are not twisted on their tracks. • Proper closing of fire screen doors in one main vertical zone activated from central control station.

Section D: Fire Dampers

D.1. Fire Dampers

This test verifies proper operation of fire dampers located throughout the vessel. General closure of all fire dampers at selected locations (if completely installed) can occur during the SFP examination.

D.2. Fire Damper Test

Verify the following at selected locations:

- Ensure ventilation system is running.
- Ensure ventilation system from local control and fan motors are secure.
- Ensure fire dampers from local control are secure and fire dampers are in the closed position - check indicators.
- Ensure damper and ventilation fans are reset.
- Ensure general closing of complete zones for ventilation and dampers from remote location (ECR/safety center). Ensure fan motors are secure and fire dampers close.
- Fire dampers and control panels are accurately marked with the number of the damper.
- Material condition of damper.

Section E: Smoke Extraction System

Revision

E.1. Smoke Extraction System Test

This test verifies the proper operation of the smoke extraction system in multi-deck public spaces that extend three or more decks. The goal is to ensure the engineered system can evacuate smoke as designed and to provide a functional view of escape if there were to be a high smoke event. The smoke control and ventilation systems should be capable, in the spaces served by such systems, of maintaining visibility in order to assist in safe escape and to allow fire fighters to operate.

Experience has shown that smoke extraction systems can fail to adequately evacuate smoke, if not installed properly. In a few instances where this has occurred, neither the testing methodology, nor the pass/fail criteria, was understood or followed. MSC/Circ. 1034 details the guidelines for smoke control and ventilation systems for internal assembly stations and atriums on new passenger ships and the testing requirement within this TTP publication are derived from this Marine Safety Circular.

The industry standard for sizing smoke management systems is to ensure that six air changes have occurred within the fire affected space, within 60 minutes. The engineering calculations for the smoke extraction system are reviewed and approved by the vessel's flag state representative during the plan review phase. The design calculations consider the required number of air changes, geometry of the protected space, and other engineering assumptions. Even though the calculations may indicate the system is properly designed, it is important to take into account proper installation and workmanship. For example, during one failed functional test it was noted that the supply fans, used to facilitate the steady flow of air, and the exhaust ducts had been installed too close together creating a "short-circuit."

One goal of the test performed during the initial certificate of compliance exam, is to evaluate the capability of the fans to perform the necessary air changes. As such, we should observe that one air change has occurred over a 10 minute period. The test is conducted with cold smoke, typically from several smoke machines. The entire space is filled full of smoke prior to starting the fans. In a real fire scenario, the ventilation fans would start when two smoke detectors activate. The expectation is that the space would never fill up entirely as long as the fans come on as required. Additionally, hot smoke would be more buoyant and would ventilate faster than the cold smoke used during the test.

During the functional test, we base our exam observations on the ability to find the emergency escapes after 10 minutes. While a good argument can be made that the approved design calculations indicate the system is appropriately sized, we will continue to base our findings by the practical test rather than accepting engineering calculations alone.

To demonstrate proper operation of atrium smoke extraction systems, the vessel performs two tests. The first test verifies the smoke detectors in the atrium automatically activate the atrium smoke extraction system and closes the boundary fire doors. The second test verifies the smoke extraction system has sufficient capacity to extract one full volumetric air change in 10 minutes.

Revision

E.2. Automation Test of Smoke Extraction System

For multiple spaces with smoke extraction systems, identify one for full testing. In additional spaces, it is acceptable to just test the operation of smoke extraction fans in manual mode and the automatic start function. Before testing the atrium's smoke extraction system, inform all personnel onboard, and ensure ship's staff are placed near the doors to keep persons not participating in the test from entering the space. Ensure cabling and shipyard equipment is clear of all fire doors that bound the atrium.

1. Position CG examiner and shipyard personnel in the atrium where the smoke extraction fans are located (or on the bridge, if it is so indicated) to verify the time at which the fans start.
2. Verify the fans set for automatic operation.
3. Activate a detection within the boundaries of the atrium.
4. Verify that the fans start automatically and are extracting air from the space.
5. Verify the fire doors in the atrium's fire boundaries automatically close if so designed.
6. Secure the test.

Revision

E.2.a. Function Test of Smoke Extraction System

Before the test, inform all personnel of the impending smoke extraction system test. Notify personnel aboard the vessel to remain clear of the atrium during the test. Ensure cabling and shipyard equipment is clear to permit closure of all fire doors that bound the atrium.

1. Place the atrium smoke extraction system in the manual mode of operation, or otherwise temporarily disable the system so the atrium fills with smoke from a smoke-generating machine.

2. Manually close all fire doors to the atrium and post personnel on the outside of each door to ensure only authorized personnel enter the atrium during the test.
3. Fill the space with smoke using smoke generating machines or equivalent. Verify the smoke spreads to all levels of the space, and visibility is reduced to approximately 1 meter (3.28 feet).
4. Once the atrium completely fills with smoke, manually start the smoke extraction fans.
5. Once you hear the fans come on, start the time and continue to run the extraction fans for a period of 10 minutes or until the space is sufficiently clear of smoke, whichever comes first.
6. During the 10 minute test period, the atrium doors are to remain closed. After the smoke clears, ensure all escape doors, especially doors that open outwards, function properly while the fans are operating and verify the system is capable of maintaining a negative pressure in relation to the surrounding spaces.
7. MSC/Circ. 1034 states that the test is successful when an escape sign adjacent to the exit is visible from an equidistant spot within the space. As this is an imperfect test, in an uncontrolled environment, with numerous variables, the USCG considers the test satisfactory if, within 10 minutes, the smoke has sufficiently cleared to allow a person positioned equidistant from all exit doors, on each level, the ability to follow any of the escape signs to an exit.
8. Secure from test.
9. Restore the smoke extraction system to the automatic mode of operation.

NOTE: **The shipyard provides a design manual identifying the volume of the atrium as well as the capacity of the extraction fans.**

Chapter 9:
Bridge Safety and Navigation Equipment

Introduction

This chapter discusses the various electronic and other supporting navigation systems of the modern cruise ship and those various components considered during the examination.

In This Chapter

This chapter contains the following sections:

Section A: Bridge Safety and Navigation Equipment

A.1. Introduction

This section introduces procedures to check bridge safety and navigation equipment and documents required by reference (d), SOLAS), and Part 164 Navigation Safety Regulations of reference (m), Navigation and Navigable Waters, 33 CFR. Ensure vessel deck officer attends to facilitate this portion of the exam.

Revision

NOTE: **Ensure a vessel deck officer is in attendance to facilitate this portion of the exam.**

A.2. Voyage Data Recorder (VDR)

Verify the following:

- Annual service, if applicable.
- Installation of the storage device and hydrostatic release.
- Secured against tampering.
- Microphone location on bridge.
- Status of mandatory alarms.
- Power source.

A.3. Vessel Maneuvering Characteristics

Verify the following:

- Maneuvering fact sheet.
- Steering gear change-over instructions.
- Log entry for steering tests.
- Rate of revolution log.

Revision

A.4. Radar and Navigation Systems

Verify serviceability on each of the following:

- Marine radar and automatic radar plotting aid (ARPA) (witness test of one unit).
- Signaling lamp.
- Means of taking bearings.
- Magnetic steering compass.
- Gyrocompass.
- Illuminated steering gyrocompass repeater.
- Illuminated rudder angle indicator.
- Electronic echo depth sounding device with echo depth sounding recorder.
- Pitch indicator for bow and/or stern thrusters.
- Rate of turn indicator.
- Steering gear instructions.
- Bridge Navigational Watch Alarm System (BNWAS).
  - ➢ Verify the "auto" mode not operational or is not connected.
- Electronic position fixing device.
- SAR aircraft radio.
- Global Maritime Distress and Safety System (GMDSS) lifeboat radios.
- Emergency position indicating radio beacon (EPIRB) for ship (float free). EPIRB for lifeboats (not float free).
- SAR locating device. Annually tested on passenger ships, within 3 months before the expiration date of the Passenger Ship Safety Certificate per reference (d), SOLAS.
  - ➢ One on each side of the bridge.
- International Maritime Satellite Organization (INMARSAT) installation/Navigational Telex (NAVTEX) and INMARSAT printers.

Revision

A.5. Electronic Chart Display and Information System (ECDIS)

Verify Electronic Chart Display and Information System (ECDIS) has a backup arrangement. This can be fully or partially electronic or paper.

Revision

A.6. Long Range Identification Tracking (LRIT)

Verify the following:

- Long range identification and tracking (LRIT) equipment or software upgrade.
- Equipment approval via a conformance test report issued by the Administration-approved application service provider (ASP).
- Documentation review for record of LRIT equipment and satisfactory testing.

A.7. Automatic Identification System (AIS)

Verify the following:

- Location of the Automatic Identification System (AIS) pilot plug near the pilot conning station and a 3-prong, 120 volt, and AC outlet.
- AIS is energized and displays the following screens:
  - Maritime Mobile Service Identity (MMSI) IMO number.
  - Ship name.
  - Type of ship.
  - Location of position fixing antenna on the ship.
  - Ship's draft.
  - Hazardous cargo (type).
  - Destination and estimated time of arrival (ETA).
  - Route plan.

NOTE: **Although not a complete list, these are the items typically verified.**

Revision

A.8. Vessel Publications and Charts

Verify the following are current:

- Lifesaving signal table.
- International Code of Signals.
- Magnetic compass deviation table.
- United States Coast Pilot ®.
- Sailing directions.
- Light list.

- Tide tables.
- Tidal current tables.
- Reference (aa), The International Regulations for Collisions at Sea 1972 (COLREGs) (series), IMO.
- Reference (bb), United States Coast Guard Navigation Rules and Regulations Handbook (series).

NOTE: **Verify an electronic plotting aid, or other means, to electronically plot the range and bearing of targets to determine collision risk.**

Revision

A.9. Other Systems on Bridge (not related to navigation safety)

Verify operational status of the following:

- Watertight door status panel (green light means closed).
- FD status panel (green light means closed).
- Sprinkler/water mist control panel.
- Fire detection system.

NOTE: **The fire detection system may be disconnected in particular spaces if detector(s) automatically restore to normal surveillance after a predetermined time appropriate to the operation. Per reference (d), SOLAS and reference (x), International Code for Fire Safety Systems (FSS Code), 2007:**

♦ Detectors in all other spaces shall remain operational.

♦ Detection systems shall provide output signals to the bridge, continuously manned control station or safety center indicating fault conditions (includes disconnecting).

♦ Fault condition shall initiate a visual and audible fault signal at the control panel which shall be distinct from a fire signal.

- Bridge radio distress panel.
- Radio installation.
- Radio communication assignments during emergency situation.
- Emergency source of power for radios.

A.10. Line Throwing Appliance/ Distress Visual Signals

Verify the following:

- Line throwing appliance:
  - Four charges.
  - Stowed at or near the navigation bridge.
  - Properly marked and ready for use.
- Rocket parachute flares:
  - At least 12.
  - Not expired.
  - Stowed in watertight containers at or near the navigation bridge.

A.11. Bridge Navigation Watch Alarm System (BNWAS)

Verify the following:

- Operational modes.
  - Automatic (Does not operate under any circumstances or is not connected).
  - Manual ON (In operation constantly).
  - Manual OFF (Does not operate under any circumstances).
- Operational sequence of indicators and alarms.

Revision

A.12. Global Maritime Distress and Safety System

Verify the following:

- Certificate is valid and GMDSS- compliant for sea area where the vessel is operating.
- Radio log maintained, for example, review entries.
- The MMSI display on digital selective calling radios matches the vessel's document.
- Dedicated crew member is on station and has sent test message.

Chapter 10: Environmental

Introduction

This chapter discusses how to verify a vessel is operating per applicable environmental rules and conventions.

In This Chapter

This chapter contains the following sections:

Section A: Waste Streams

A.1. Waste Streams

This test verifies the vessel is operating per its waste management procedures. Examine oil pollution prevention equipment and at least one of the five waste streams with a focus on verifying regulatory compliance per reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series), and reference (cc), Environmental Inspection Checklist; Addendum to Foreign Passenger Vessel Examination Book, CG-840, Navigation and Vessel Inspection Circular (NVIC) 04-04.

Per reference (dd), MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls, MMS Work Instruction, 1 May 2014, and Section A of reference (cc), must be scanned into MISLE.

NOTE: **Reconcile waste stream equipment against the Environmental Protection Agency (EPA) Notice of Intent (NOI) and associated equipment operations (including intended operations thereof) compared with the details outlined in the applicable sections of the ship's VGP. This includes gray water, pool water, black water and ballast water. Confirm that waste stream equipment operating procedures align with the provisions of the VGP as well as the ship's SMS.**

Revision

A.1.a. Section C1 Oil Pollution Prevention Systems

Witness operation of test per:

- Reference (b), USCG Marine Safety Manual, COMDTINST M16000.7 (series), Volume II: Materiel Inspection.
- Reference (ee), Guidelines for the Inspection of Oily Water Monitor and Separator Systems, COMDT (G-MOC) Policy Letter 04-13 (series).
- Reference (ff), Guidance for the Enforcement of MARPOL Annex I during Port State Control Examinations, COMDT (G-PCV) Policy Letter 06-01.

NOTE: **If not approved under reference (gg), Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships, Resolution MEPC.107 (49), the system components must have a Coast Guard approval certificate.**

Verify the following:

- Operating instructions and International Convention for the Prevention of Pollution from Ships (MARPOL) placards are posted.
- Piping diagram accurately reflects piping system.
- Oil record book has accurate entries.
- No oil to sea interfaces show signs of leaking seals.

A.1.a.(1). Bunker Stations

Verify the following:

- Size of oil containment enclosure and associated drains and where they drain.
- All hose to pipe connections are located within the containment area.
- Oil pollution placards, oil transfer procedures, and system line diagrams are posted.
- Person-in-charge designation is assigned.
- Transfer hoses hydrostatic testing per Section 156.170 Equipment Tests and Inspections of reference (m), Navigation and Navigable Waters, 33 CFR.
- Bunker station markings.
- Bunker station lighting (normal and emergency).
- Standard discharge connections are in place.
- Proper operation of remote shut down of oil transfer pumps.

A.1.b. Oily Content Meter (OCM) Tests

Witness operational test per:

- Reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series).
- Reference (ee), Guidelines for the Inspection of Oily Water Monitor and Separator Systems, COMDT (G-MOC) Policy Letter 04-13 (series).
- Reference (ff), Guidance for the Enforcement of MARPOL Annex I during Port State Control Examinations, COMDT (G-PCV) Policy Letter 06-01.

Verify oily content meter (OCM) has current calibration certificate and tamper seals.

NOTE: **Reference (gg), Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships, Annex 13, Resolution MEPC.107(49), requires a seal on the infrared sensing unit, allowing the crew to only check instrument drift, repeatability, and the ability to re-zero the unit. No further testing is required.**

- Witness operational tests and verify alarms at 15 parts per million and automatic shutdown.
- Verify testing is per manufacturer's test procedures.

NOTE: **Never test the OCM using sticks, tea, coffee, or similar unorthodox methods. Use reference (ff), Guidance for the Enforcement of MARPOL Annex I during Port State Control Examinations, COMDT (G-PCV) Policy Letter 06-01, as guidance.**

Revision

A.1.c. Grey Water

Grey water includes discharges from galley, sinks, washbasin drains, showers, and baths. It does not include drains and sinks from medical spaces.

Verify the following with section C2 of reference (cc), Environmental Inspection Checklist; Addendum to Foreign Passenger Vessel Examination Book, CG-840, Navigation and Vessel Inspection Circular (NVIC) 04-04:

- Ensure combined grey water/black water throughput does not exceed the throughput of the marine sanitation devices (MSD) systems.
- Treatment method.
- Testing and disposal records.

NOTE: **If there is evidence of hazardous waste disposed through grey water, treat it as hazardous waste stream and follow vessel documentation on proper disposal.**

NOTE: **Verify ballast system isolation from overboard discharge if ballast tanks hold grey water in port.**

Revision

A.1.d. Black Water

Black water includes MSDs and other systems to treat, store, and discharge sewage.

Verify the following with section C3 of reference (cc), Environmental Inspection Checklist; Addendum to Foreign Passenger Vessel Examination Book, CG-840, Navigation and Vessel Inspection Circular (NVIC) 04-04:

- Proper MSD installation.
  - USCG Certificate of Approval or;
  - Valid International Sewage Pollution Prevention Certificate (ISPPC) indicating system complies with references (g), MARPOL, per reference (hh), Voluntary Compliance with International Sewage Regulations in Annex IV to MARPOL 73/78, Navigation and Vessel Inspection Circular (NVIC) 1-09.
- A durable nameplate attached to the device containing the following information:
  - Name of manufacturer.
  - Name and model number of the device.
  - Month and year of completion of manufacture.
  - Serial number.
- Additionally, the device nameplate may contain the required markings as required by the issued type certification, issued by the RO.
- Adequate capacity or throughput for the number of persons allowed aboard.
- Posting of operating instructions.
- Drains from hospital space and dedicated washer drain to black water tank.
- Treatment method.
- Testing and disposal records.
- Verify each Type I or Type II device is capable of being secured in a manner which prevents discharge of treated or untreated sewage. Acceptable methods of securing the device include:
  - Closing the seacock and removing the handle.
  - Padlocking the seacock in the closed position.
  - Using a non-releasable wire-tie to hold the seacock in the closed position.

Revision

A.1.e. Hazardous Waste

Hazardous waste includes dry cleaning (containing perchloroethylene, commonly called *"PERC"*) waste, used paints, thinners containing hazardous substances, silver-bearing photo-processing waste, cleaning solutions, and other items containing hazardous substances.

Verify the following with section C4 of reference (cc), Environmental Inspection Checklist; Addendum to Foreign Passenger Vessel Examination Book, CG-840, Navigation and Vessel Inspection Circular (NVIC) 04-04:

- Designated storage areas for hazardous wastes.
- Spill control and decontamination equipment is readily available.
- Vessel has an assigned EPA identification number.
- Proper documentation of hazardous waste and accounting of disposal.
- How hazardous waste is determined.
- Proper packaging and marking of hazardous waste.

Revision

A.1.f. Non-Hazardous Waste

Non-hazardous shipboard waste includes plastics and synthetic material, medical waste, food waste, and recyclables such as glass, cardboard, aluminum, and metal cans.

Verify the following with section C5 of reference (cc):

- Shipboard garbage management plan.
- Garbage record book entries and incineration records.
- Waste sorting to prevent hazardous waste from entering non-hazardous waste stream.
- Means are in place to prevent plastics or synthetics discharge overboard.
- Placard placement. Per reference (ii), 2012 Guidelines for the Implementation of MARPOL Annex V, Annex 24, Resolution MEPC.219(63):
  - Placed in prominent places where crew work and live and in areas for collecting garbage.
  - Placed in prominent places where passengers lodge and congregate, which include cabins and all deck areas for recreational purposes open to passengers.
- Per reference (jj), Guidelines for Compliance and Enforcement of the Emission Control Areas Established Within the United States Jurisdiction as Designated in MARPOL Annex VI Regulation 14, CG-CVC Policy Letter 12-04, non-combustible waste receptacles are used (exceptions for wet food wastes, metal, and glass).

- Recycling programs if in place and used per ship's SMS.
- Proper disposal of cooking grease from grease traps.
- Adequate fire detection and protection in place (heat detectors in cold storage).

Section B: Emission Control Area (ECA)

B.1. Emission Control Area (ECA)

Purpose is to ensure compliance with:

- Reference (jj), Guidelines for Compliance and Enforcement of the Emission Control Areas Established Within the United States Jurisdiction as Designated in MARPOL Annex VI Regulation 14, CG-CVC Policy Letter 12-04.
- Reference (kk), ECA Job Aid, Domestic and Foreign Vessels, CG-CVC, 24 July 2012.
- Reference (ll), Guidelines for Ensuring Compliance with Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) 73/78; Prevention of Air Pollution from Ships, CG-543 Policy Letter 09-01.

Before a cruise ship begins operation in the North American Emission Control Area (ECA).

- Per reference (jj), determine the approved method used to comply with reference (g), MARPOL, in the ship's IAPP supplement (if issued by class).
- Per reference (g), verify Coast Guard receipt of an equivalences proposal from the Flag Administration.

Section C: Ballast and Bilge Systems

C.1. Ballast Water Management (BWM) and Plans

Verify the BWMS and plan per reference (mm), Ballast Water Management for the Control of Aquatic Nuisance Species in the Waters of the United States, Navigation and Vessel Inspection Circular (NVIC) 07-04 (series), and Part 151 Vessels Carrying Oil, Noxious Liquid Substances, Garbage, Municipal or Commercial Waste, and Ballast Water of reference (m), Navigation and Navigable Waters, 33 CFR.

- Meets ballast water management requirements through one of the following under reference (mm).
- Approved Ballast Water Management System.
- USCG accepted Alternate Management System (AMS).
- Retains ballast aboard.
- Use water from only a public water supply (PWS).
- USCG issued extension letter for BWMS installation.
- Vessel specific.
- Allows those responsible for the plan's implementation to understand and follow the BWM strategy of the vessel.
- Crew trained on the application of the BWM and sediment management procedures.
- Records for all voyages to U.S. ports or places where the vessel anchored or moored.
- Records retained for 2 years.
- Ballast water report submitted to the National Ballast Information Clearinghouse (NBIC).

C.2. Bilge Pumping System

This test verifies proper operation of emergency bilge suctions from remote location (ECR) and/or locally.

C.2.a. Bilge Alarms

Verify the following:

- The visual and audible alarm register on the alarm panel when alarm is activated using a number of indicators throughout the vessel.
- Record of all alarms in the alarm log printout.

Revision

C.2.b. Bilge Pumps

Verify operation of bilge pumping equipment.

- Fill various bilges to alarm condition with clean water.
- Pump water from the most remote bilge pocket using the farthest bilge pump from space.
- Repeat the operation using all required bilge pumps.
- Prove operation of main space emergency bilge suction.
- Operation of remotely operated valves both manually and remotely.
- Verify main space emergency suction. This can be performed by using a piece of cardboard or similar material to verify line provides suction. Do not use plastic bags filled with water as they might get lodged in the system.

Chapter 11:
Machinery Systems

Introduction

This chapter discusses proper operation of main and emergency machinery systems.

In This Chapter

This chapter contains the following sections:

Section A: Machinery Systems

Revision

A.1. Main Propulsion Engines

This test verifies proper operation of bridge (or ECR) remote shutdown for main propulsion in emergency conditions and operation of engine order telegraph.

Verify the following:

- Propulsion circuit breaker opened (cycle converter disconnected) and alarms are indicated when bridge engage emergency stop switch.
- Test is repeated using emergency stop in ECR and at the emergency steering propulsion located in each pod room.
- Audible and visual alarms activate when bridge calls down throttle commands by way of engine order telegraph.
- Ensure position of ECR engine order telegraph matches requested position. Confirm alarms silence when positions match.
- Repeated tests for forward and astern commands.
- Shaft speed diagram is located at emergency propulsion station.
- Operation of all engine order telegraphs at all navigation stations to include each pod room.

A.2. Incinerator

This test verifies the functionality of emergency shut-down and general arrangement of required safety devices of the incinerator.

Verify the following:

- Emergency stop switch, located outside the compartment, stops all power to the equipment. The emergency stop switch also stops all power to the fuel pumps.
- Incinerator is internally equipped with fire suppression systems.

A.3. Steering Gear

This test verifies proper operation of all steering gears per reference (d), SOLAS, in both modes of operation (normal and emergency), from all locations. Test system alarms. Test vessels equipped with azipod propulsion in the same manner.

Verify the following:

- No restrictions are in place (divers, dry dock blocks) to conduct test.
- Proper operation from all remote operating locations in normal mode. Capable of putting the rudder over from 35 degrees one side to 35 degrees on the other side.

- Proper operation locally in emergency mode. Capable of putting the rudder over from 35 degrees one side to 35 degrees on the other side.
- Time required to put the rudder from -35 degrees to +30 degrees is not greater than 28 seconds on one pump.

NOTE: **It is not necessary to perform a 360 degree test on any podded system. Test pods the same way as a standard rudder test.**

- Rudder angle indication matches locally and remotely.
- Alarms in ECR and bridge navigation station. Alarms are not simulated (bypass). Alarms to test:
  - Low hydraulic oil - removal of probe from tank if possible (not applicable for installed electric turning motors).
  - Loss of power - secure power panel.
- Steering gear signs with instructions and a simple schematic for switching between systems are posted and accurate both in steering gear rooms and on bridge.
- Two operational means of communications between the bridge and steering gear room.
- Proper operation of gyro repeater. If repeater is not present, ensure procedures are in place to calibrate gyro repeater prior to mounting.
- Presence of handrails, slip-free surfaces, adequate emergency lighting.

NOTE: **Vessels equipped with steering components not containing hydraulic fluid may not have handrails, gratings or other non-slip surfaces.**

- No excessive hydraulic leaks.
- No unusual motor noise or vibration.

A.4. Emergency Shutdowns

This test verifies the emergency shutdowns of machinery space ventilation (fans and dampers), fuel pumps, fuel oil purifiers (separators), and quick closing valves (bullet) in machinery spaces, locally and from ECR.

CAUTION: **To prevent possible equipment damage, do not test any emergency shutdown devices used with operating equipment.**

A.4.a. Fuel Oil Transfer Pumps	Verify the following: • Fuel oil transfer pumps are running. • Ability to secure fuel oil transfer pumps from local control and fuel oil transfer pumps are secure. • Fuel oil transfer pumps are reset. • Ability to secure fuel oil transfer pumps from remote location (ECR/Safety Center) and fuel oil transfer pumps are secure.
Revision A.4.b. Machinery Spaces Ventilation	Verify the following: • All machinery space ventilation fans are running and all machinery space fire dampers are open. • Ventilation is secured from remote location (ECR/Safety Center). • All ventilation fans secure and all dampers close. • Fire dampers and control panels are accurately marked with the number of the damper.
A.4.c. Fuel Oil Purifiers	Verify the following: • Purifiers are running. • Purifiers from local control are secure. • Purifiers are reset. • Purifiers from remote location (ECR/Safety Center) are secure.
A.4.d. Remote Fuel Valves (Quick Closing Valves)	Verify the following: • Valve closing groups are identified and their location is displayed. • Quick closing valves from master station are secure. • Closure of all quick closing valves in group. • All quick closing valves in group are marked correctly.
NOTE:	**Check remote fuel oil (F/O) shut-off valves required by reference (d), SOLAS. Ensure these valves are not blocked open, or the valve actuators are not defeated in any way.**

Revision **A.5. Emergency Diesel Generator**

This test verifies secondary means of starting for emergency generator as well as testing ancillary equipment.

Start the emergency generator using the secondary means of starting. This should be done in the manual mode.

Revision A.5.a. Secondary Means of Starting

Verify the following:

- Check guards around rotating equipment.
- Lagging is securely in place and not oil soaked.
- Adequate lighting and generator and switchboard.
- Communications between emergency generator room and bridge.
- Test fuel shut off valve when emergency generator is stopped.
- If equipped, test emergency air compressor. Verify air compressor charges receivers in emergency generator space.
- Ventilation louvers open and fan motors start automatically. Louvers should not open in a default (no power) situation.

Revision **A.6. Transitional Power**

See below on how to verify transitional power in the battery room(s).

Revision A.6.a. Battery Room(s)

Verify the following:

- Ventilation to space is operational.
- Batteries are mounted properly and braced.
- No excessive bubbling from the batteries that would indicate battery discharge.
- Deck is insulated on top of batteries or batteries raised off deck.
- Proper personal protective equipment (PPE) for battery testing (if required).

Section B: Emergency Power Systems

B.1. Emergency Source of Power Test Introduction

This test verifies the following systems operate properly in emergency conditions:

- Emergency lighting.
- Emergency diesel generator.
- Centralized closing of fire screen doors watertight doors.
- PA systems and general alarms.
- Elevator control per reference (d), SOLAS.
- Emergency fire pump.
- Steering gear motor.
- Active fire suppression/detection systems.
- Transitional battery power.

B.1.a. Prior to Test

Prior to the test:

1. Clear the vessel of all nonessential personnel. Prevent remaining personnel from circulating throughout the ship or moving through watertight and semi-watertight doors, and fire screen doors.
2. Open all watertight doors, semi-watertight doors and fire screen doors. Ensure all openings are clear of cabling and equipment, and openings are unblocked and able to close.
3. Divide vessel up between inspectors ensuring all decks, including outside embarkation decks, are covered (teams can conduct multiple functions):
   - Identify team to test smoke detectors and sprinkler section valves.
   - Identify team to test emergency fire pump.
   - Identify team to test steering gear motor.
   - Identify teams to verify elevator operations.
   - Ensure teams are equipped with communications, vessel plans for area assigned, keys to all locked spaces, and test equipment.
   - Teams typically consist of USCG, a shipyard representative and vessel owner representative.
4. Assign a crewmember in the emergency battery room and/or individual Uninterrupted Power Source (UPS) units to record voltage and amps of emergency batteries every 5 minutes. If separate, also monitor GMDSS transitional batteries.

5. Confirm shore tie disconnect. If shore tie remains connected, then open breaker and locked out for safety.
6. Identify operation of elevators as programmed.
7. Functionality of LLL and photo luminescent strips.
8. Ensure all exterior lighting (navigation, embarkation, etc.), general alarm and PA zones are energized and active.

Revision

B.1.b. Test Procedures

Use the following test procedures:

1. Position all teams in ready positions as identified in pre-test brief.
2. Secure all main generators (main generators in manual mode or disabled). Transitional source of power temporarily supplies emergency lighting and services per reference (d), SOLAS.
3. Verify emergency generator starts and comes on-line automatically.
   - Check guards around rotating equipment.
   - Lagging is securely in place and not oil soaked.
   - Adequate lighting around generator and switchboard.
   - Communications between emergency generator room and bridge.
   - Fuel shut off valve when emergency generator is stopped.
   - Second means of starting – can be done in manual operation.
   - If equipped, emergency air compressor operates to include ability to provide starting air.

NOTE: **Per reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series), vessels returning to service requiring a Certificate of Compliance, for ships having two emergency generators, test each generator independently.**

NOTE: **If the vessel has a second diesel generator as an "additional diesel generator" that can send power to the emergency switchboard to supply vital systems powered by the emergency generator, test it.**

4. Confirm elevators have moved to programmed location.
5. Verify operation of emergency fire pump and steering pump.

6. Verify operation of navigation lights (emergency lighting).
7. Secure emergency generators, vessel is now on transitional power (batteries). Verify the following:

NOTE: **New ships might have transitional power sources located in multiple spaces to provide uninterrupted power supply (UPS) for more than one zone. Take battery readings at individual UPSs that provide power to equipment requiring connection to the transitional power circuit. Verify in advance and communicate testing requirements to the ship yard as it requires additional resources to verify readings at multiple locations.**

- Ventilation to space is operational.
- Battery mounting and bracing.
- No excessive bubbling from the batteries indicating battery discharge.
- Deck insulation on top of batteries or batteries raised off deck.
- PPE for battery testing.

8. Bridge closes all watertight doors (demonstrate one closing using stored energy). Take note of the identification number of doors not closed. Verify such doors at the conclusion of the test. Reset door closure switch on bridge to "LOCAL MODE" prior to sending out teams.
9. Bridge closes all fire screen doors and semi-watertight doors. Take note of the identification number of doors not closed. Verify such doors at the conclusion of the test.
10. Continuously sound music, or speak at 30 second intervals via the PA system. Sound the general alarm every minute for 2-5 minutes.
11. Tour all spaces throughout vessel to ensure general alarm, PA system; LLL and emergency lights are operating and adequate.
12. Operate a random number of sliding fire screen doors 10 times under stored energy. Identify any fire screen doors that are not fully closed.
13. Test fire alarms and sprinkler section valves alarm to ensure systems are on transitional source of power. Verify alarms on bridge console.
14. After thirty minutes, take a battery reading and start emergency generator. Convert readings to percentage of power remaining in the batteries, more than a 12 percent drop from nominal voltage is a failed test. Continue with tour of vessel under emergency generator until entire vessel is examined.

15. Verify emergency generator is feeding the main engine auxiliary pumps (e.g., lube oil and fuel oil pumps, etc.). Start main generators and observe generators assume the load.

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Chapter 12:
Vessel Stability and Watertight Integrity

Introduction This chapter discusses a vessel's ability to remain stable and watertight.

In This Chapter This chapter contains the following sections:

Section A: Stability and Watertight Integrity

A.1. Stability Systems

Verify the following:

- Stability booklet is available to officers and stability computer is aboard or ashore.
- Crew is familiar with procedures.

A.2. Flooding Control Measures

This test verifies proper operation and arrangements of flooding control measures.

Revision **NOTE:** **Flooding control devices need to be constructed to the same standard as the boundary they are located in. If a cross flooding door is located in an A60 boundary, then it needs to be constructed of a material that meets A60 rating and those spaces must be substantially tight for proper function. Devices in A-class divisions are substantially tight when closed with respect to the passage of flame and smoke.**

Verify the following:

- Sounding closures are equipped with counterweights.
- Cross flooding plates are operational in cases of structural openings.
- Active system (valves or other arrangements) operate properly.
- Damage control plans are posted and accurate.

A.3. Flooding Detection System

Verify the following:

- Random number of sensors are operable.
- Alarm acknowledged in ECR or manned watch station.
- Detection system is alternately powered by the emergency switchboard.

A.4. Watertight Doors (WTD)

Per reference (d), SOLAS, this test verifies manual opening-closing procedures at door location and from control stations on the bulkhead deck. Test verifies stored energy source is adequate to provide three cycles of operation for the watertight doors (WTD).

Verify the following:

- Accurate operation instructions are posted at door and control stations.
- Central control station lists all doors and their status operable from control station. Each door operable from control station is identified by number, location, and status of door.
- Operation of the door in local mode:
  - Door closure rate must not be less than 20 seconds or more than 40 seconds.
  - Moveable sill plate operates freely.
- Operation of the door from bulkhead deck control station:
  - Audible alarms operate when door closure starts.
  - Visual alarms (if equipped) operate when door is in motion.

NOTE: **If system is hydraulic, secure power to hydraulic pumps to ensure hand pump operates as designed.**

- Operation of the door from bridge station with master switch set in the "doors closed" mode:
  - All audible alarms operate 5-10 seconds prior to door closing.
  - Visual alarms (if equipped) operate when door is in motion.
  - With door fully closed, open locally 1 meter, release handle, and door closes immediately. Audible alarm can be heard when door is moving.

NOTE: **If on the bridge, verify door closure tests during the emergency source of power test.**

Revision

A.5. Semi Watertight Doors (SWTD)

This test verifies proper operation of semi-watertight and splash doors in local and remote operations.

Verify the following:

- Prominent posting of accurate operating instructions at door.
- Operation of the door in local mode:
  - Door closure rate in no case is less than 20 seconds or more than 40 seconds.
- Operation of the door from bridge station with master switch set in the "doors closed" mode:
  - All audible alarms operate 5-10 seconds prior to door closing.
  - Semi-water tight door (SWTD) push back safety device (if equipped) operates as per manufacturer's specification.
  - With door fully closed, open locally and verify door closes immediately. Audible alarm can be heard when door is moving.
- Door status at central control station (bridge).

A.6. Subdivision and Load Line Markings

Verify the following:

- P1 (ships keel laid on or after 1 JAN 2009) principal passenger condition (C1 for existing ships).
- P2 (ships keel laid on or after 1 JAN 2009) RO-RO passenger/cargo loading (C2 for existing ships).
- Permanent; contrasting color.
- Proper class society markings.

Chapter 13:
Survival Equipment

Introduction This chapter discusses survival equipment.

In This Chapter This chapter contains the following sections:

Section A: Lifesaving Apparatus

A.1. Lifesaving Equipment

This test verifies proper operation of lifesaving apparatus and launching appliances. Lifesaving apparatus includes:

- Lifeboats and rescue boats.
- Davit-launched and float-free liferafts.
- Marine Evacuation Systems.
- Descent devices and/or embarkation ladders.
- Tender safety systems.

NOTE: **Lower only lifeboats and relevant davits on ship's outboard side.**

A.1.a. Survival Craft Requirements

Verify satisfactory quantity and type of primary lifesaving equipment based on the number of passengers and crew permitted by the SOLAS certificates, and proper installation and stowage. Pay particular attention to the material condition of the lifeboat/rescue boats, lifeboat on-load release mechanisms, falls, and davits.

NOTE: **Per reference (d), SOLAS, the total lifeboat and liferaft capacity shall be at least 125 percent of the total persons allowed.**

A.1.b. Lifeboats and Rescue Boats

Witness lowering to the water; verify release and operation of all lifeboat/rescue boats on outboard side of vessel. Witness the crew start lifeboat engines for lifeboats on the untested side.

Verify the following:

- Radio communications from lifeboat/rescue boat(s) with vessel.
- Lifeboat/rescue boat equipment (see Chapter 13: Survival Equipment, Section A.1.b.(1) Lifeboat Equipment for more details).
- Lifeboat skates or fenders are in place.
- Lifeboat/rescue boats are marked per reference (nn), Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010.
  - Number of persons approved for the lifeboat is clearly marked in clear permanent characters.

  - Name and port of registry of the ship to which the lifeboat belongs is marked on each side of the lifeboat's bow in block capitals of the Roman alphabet.
  - Markings identifying the ship to which the lifeboat belongs and lifeboat number are visible from above.
- Launching/inflating placards are present and easily seen under emergency lighting conditions.

A.1.b.(1). Lifeboat Equipment

Spot check availability of the following equipment, in the quantities shown, and complies with reference (nn), Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010:

- Sufficiently buoyant oars, tholepins, crutches, or equivalent arrangements.
- Two boat hooks.
- Buoyant bailer and two buckets.
- Survival manual.
- Illuminated compass.
- Sea anchor.
- Two efficient painters.
- Two hatchets.
- Three liters of fresh water per each person lifeboat is permitted to accommodate.
- Watertight receptacles containing 3 liters of fresh water for each person the lifeboat is permitted to accommodate, of which either:
  - 1 liter per person can be replaced by a desalting apparatus capable of producing an equal amount of fresh water in 2 days.
  - Or 2 liters per person can be replaced by a manually powered reverse osmosis desalinator capable of producing an equal amount of fresh water in 2 days.
- Rustproof dipper with lanyard.
- Rustproof graduated drinking vessel.
- Food rations totaling not less than 10,000 kilojoules (kJ) for each person the lifeboat is permitted to accommodate; in airtight packaging and stowed in a watertight container.
- Four rocket parachute flares, six hand flares, and two buoyant smoke signals.

- One waterproof electric torch suitable for Morse signaling with one spare set of batteries and one spare bulb in a waterproof container.
- One daylight signaling mirror with instructions for signaling ships and aircraft.
- One copy of the lifesaving signals on a waterproof card or waterproof container.
- One whistle or equivalent sound signal.
- First-aid outfit in a waterproof container.
- Anti-seasickness medicine sufficient for at least 48 hours and one seasickness bag for each person.
- Jackknife remains attached to the boat by a lanyard.
- Three tin openers.
- Two buoyant rescue quoits, attached to not less than 30 meters of buoyant line.
- If not automatically self-bailing, a manual pump suitable for effective bailing.
- One set of fishing tackle.
- Sufficient tools for minor adjustments to the engine and its accessories.
- Portable fire-extinguishing equipment of an approved type suitable for extinguishing oil fires.
- Searchlight with horizontal and vertical sector of at least six and measured luminous intensity of 2500 candle power which can work continuously for not less than 3 hours.
- An efficient radar reflector, unless a survival craft radar transponder is stowed in the lifeboat.
- A thermal protective aid sufficient for 10 percent of the number of persons the lifeboat is permitted to accommodate or two, whichever is greatest.

A.1.c. Davit-Launched and Float-Free Liferafts

Verify the following:

- Stowage, container markings, and arrangements for securing liferafts to vessel.
- Structure and foundation of davit is sound.
- Roller tracks lubricated and not wasted.
- Wire renewal dates are within 5 years for existing vice new vessels.
- No obstructions to lowering.

- Limit switches are present and function as designed.
- Launching instructions present.
- Launching/inflating placards are present and easily seen under emergency lighting conditions.
- Float-free raft installations are properly stowed away from overhead obstructions.
- Current hydrostatic release properly connected to the liferaft.

A.1.d. Marine Evacuation Systems (MES)

Verify the following:

- When possible, witness deployment of at least 50 percent of marine evacuation systems (MES) per reference (oo), Revised Recommendation on Testing of Life-Saving Appliances, Annex 6, Resolution MSC.81(70). If the remaining untested MES units differ substantially from the deployed units, witness the deployment of these units as well.

NOTE: **If a Coast Guard examiner is not available to witness initial MES deployment during a ship's construction, a report from the ship's Classification Society attesting to a witnessed, satisfactory deployment is acceptable.**

- For new installations, witness a partial evacuation test per reference (oo).

NOTE: **This partial evacuation test is not required for vessels with existing MES installations during an initial COC. The partial evacuation test does not involve timed evacuation.**

- System does not interfere with launching other lifesaving equipment fitted aboard and that the system and its liferafts are clear of obstructions such as propellers, and stabilizers.
- Is deployable by one person.
- Have proper container markings.
- Launching instructions present and can be seen under emergency lighting.

A.1.e. Descent Devices and/or Embarkation Ladders

Verify the following:

- In good condition and securely fastened.
- Material condition of deck pad-eyes.

- Sufficient length.
- Descent units checked by RO.
- Embarkation emergency lighting.
- Embarkation ladder is in good condition.

A.1.f. Tender Safety Systems

If the Record of Equipment lists lifeboats used as tenders for the PSSC and fully complies with requirements of reference (d), SOLAS, and reference (nn), Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010, this satisfies the requirements for individual lifeboats to hold a PSSC.

During annual exams, units are not required to issue a COC to these lifeboats when the Record of Equipment lists them for the vessel's PSSC. Where tenders maintained aboard the vessel are not lifeboats and are issued a PSSC or Lifeboat/Tender Safety Equipment Certificate, units issue a COC to each such tender after satisfactory examination.

NOTE: **While there is existing policy for using lifeboats as tenders in reference (d), there is no specific policy for small boats (inflatable/"zodiac") conducting tender operations. Existing policy allowing lifeboat tender operations in reference (d) is based on the inherent level of safety provided by reference (nn), requirements regarding stability, navigation, and safety equipment. Contact CSNCOE for guidance if using inflatables as tenders.**

NOTE: **If a vessel intends to operate tenders in U.S. waters, there might be additional equipment aboard as designated by the RO. The tender safety certificate has a list of additional equipment.**

Section B: Lifesaving Equipment

B.1. Lifesaving Equipment	This test verifies proper operation of lifesaving equipment. Spot check lifesaving equipment and stowage location against the approved LSA Plan. Lifesaving equipment includes: • Lifejackets. • Life rings/ring buoys. • Immersion suits/anti-exposure suits. • Thermal protective devices. • Distress visual signals.
B.1.a. Lifejackets	Check random sample of lifejackets (adult, children, and infant) verifying the following: • Condition. • Stowage. • Retro-reflective material. • Lights. • Whistles. • PSSC identifies proper number for adults (5 percent extra), children (10 percent or more), and watch standers (sufficient number for members on watch).
B.1.a.(1). Infant Lifejackets	Verify the availability of sufficient number of infant lifejackets: • How vessel determines how many infant lifejackets are required for each voyage. • 2.5 percent or more for voyages less than 24 hours. • 100 percent for voyages greater than 24 hours.
B.1.a.(2). Oversized Lifejackets	Verify the availability of sufficient number of oversized lifejackets: • How vessel determines what a sufficient amount of oversized lifejackets or lifejacket extenders is aboard. • Vessel has sufficient oversized lifejackets, OR; • Vessel has sufficient number of extender straps.

B.1.a.(3). Stowage of Lifejackets	Verify the following: • Stowed in containers/compartments clearly marked with type and amount of lifejackets. • Stow in escape routes or passenger muster stations. • Stowage location readily identified if stowed in cabins. • Additional lifejackets equal to the largest highest personnel capacity of main vertical zone.
B.1.b. Life Rings/Lifebuoy, Immersion Suits, Thermal Protective Devices	Verify the following: • Arrangement and distribution of life rings/lifebuoys per reference (d), SOLAS. ➢ Condition (reflective tape/delamination/grab lines/lights functional). ➢ Proper number with lights (50 percent of total). ➢ Vessel name and port of registry clearly marked. • Two life rings/lifebuoys equipped with smoke canister on bridge wing and both are equipped with a quick release from the vessel. • Sample immersion suits or thermal protective aids to verify compliance with reference (nn), Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010 [if required to carry aboard per reference (c), Shipping, 46 United States Code (U.S.C.)]. • Quantity and arrangement per reference (d). • Personal lifesaving equipment is correctly marked with prescribed IMO symbols.

Chapter 14:
RO-RO Addendum

Introduction

This chapter discusses specific requirements for RO-RO vessels as outlined in reference (d), SOLAS.

In This Chapter

This chapter contains the following sections:

Section A: Escape Requirements

A.1. Introduction	This test verifies means of escape from RO-RO and special category spaces as well as specific requirements for means of escape for RO-RO passenger spaces.
A.2. Means of Escape from Machinery Spaces	Verify one of the escape routes from the machinery spaces where crew normally operates avoids direct access to any special category space.
A.3. Means of Escape from RO-RO Spaces	Verify two means of escape from RO-RO spaces. • Provide safe escape to lifeboat and liferaft embarkation decks. • Located at the fore and aft ends of the space.
A.4. Additional Escape Requirements	Verify the following: • Escape routes provided from every normally occupied space to an assembly station. • External routes are provided from open decks to the survival craft embarkation stations. • Openings in enclosed spaces adjoining an open deck can be used as emergency exits. • Escape routes are unobstructed by furniture and other obstruction. • Decks are sequentially numbered starting with 1 at the tank top or lowest deck and the deck number prominently displayed at stair landings. • Prominent display in each cabin and all public spaces of simple “mimic” plans showing “you are here” position and escape routes marked by arrows. • Handrails or handholds provided in corridors along entire escape route.

Section B: Electrical Requirements

B.1. Introduction

This test verifies proper operation of additional emergency lighting requirements for RO-RO vessels.

B.2. Supplementary Emergency Lighting

Verify the following:

- All public spaces and alleyways have supplementary electric lighting that can:
  - Operate for 3 hours during failure of all other sources of electrical power.
  - Operate under any condition of heel.
- Disconnection of any chargers or other sources of power from the lighting unit accumulator battery during testing.
- Continuous charge of lighting units, where practical, from the emergency switchboard.
- A portable rechargeable battery operated lamp in every crew space alleyway, recreational space, and every normally occupied working space unless equipped with supplementary emergency lighting.

Section C: Stability Management

C.1. Introduction

This test verifies special requirements for RO-RO spaces stability management are in place.

C.2. Integrity of the Hull

Verify the following:

- Vehicle ramp openings are weathertight and have audible alarms and indicators that sound at the navigation bridge.
- Indicators are located on the navigation bridge for all shell doors, loading doors and other closing appliances meeting the requirements of reference (d), SOLAS.
- Video surveillance and water leakage detection installed to provide an indication of any leakage through inner and outer bow door, stern door or any other shell door that could lead to flooding of the special category or RO-RO spaces.

NOTE: **Per reference (d), detection alarms shall sound at the navigation bridge as well as the engine control station.**

C.3. Special Requirements for RO-RO Passenger Vessels

Verify the following:

- Continuous patrol or monitoring of special category and RO-RO spaces by effective means such as video surveillance.
- Posted operating procedures for closing and securing all shell doors, loading doors, and other closing appliances.

Section D: Special Requirements

D.1. Introduction	This test verifies additional safety measures to address the fire safety objectives for ships fitted with vehicle, special category, and RO-RO spaces.
D.2. Ventilation Systems	Verify the following: • A power ventilation system separate from other ventilation systems sufficient to give: ➢ Special category spaces - 10 air changes per hour. ➢ Ships with closed RO-RO and vehicle spaces other than special category spaces carrying more than 36 passengers – 10 air changes per hour. ➢ Ships with closed RO-RO and vehicle spaces other than special category spaces carrying less than 36 passengers – 6 air changes per hour. • Means provided on navigation bridge loss of required ventilation. • Arrangements provided a rapid shutdown and effective closure of the ventilation system from outside the space.
D.3. Permanent Openings	Verify the following: • Permanent openings in side plating. • Location of ends or deckhead so fire does not endanger: ➢ Stowage areas, embarkation stations for survival craft and accommodation spaces. ➢ Service spaces and control stations in super structures and deckhouses above.
D.4. Electrical Equipment and Wiring	Per reference (d), SOLAS, electrical equipment and wiring installed in exhaust ventilation duct is approved for use in an explosive petrol and air mixture.
D.5. Structural Fire Protection	Verify “A-60” class standard insulation for boundary bulkheads and decks of special category spaces and RO-RO spaces. However, where a category (5), (9) or (10) space is on one side of the division, reduce the standard to ‘‘A-0.’’ Where fuel oil tanks are below a special category space or a RO-RO space, reduce the integrity of the deck between such spaces to ‘‘A-0’’ standard.

D.6. Fire Extinction

Verify the following:

- Vehicle spaces and non-special category RO-RO spaces are sealable from outside the cargo spaces and have a fixed gas fire-extinguishing system.
- RO-RO and vehicle spaces not capable of being sealed and special category spaces have an approved fixed pressure water-spraying system for manual operation which can protect all parts of any deck and vehicle platform having:
  - Pressure gauge on the valve manifold.
  - Clear marking on each manifold valve indicating the spaces served.
  - Instructions for maintenance and operation located in the valve room.
- On fixed pressure-spraying fire extinguishing systems (if provided):
  - Spaces above the bulkhead deck, scuppers are fitted to ensure water is rapidly discharge directly overboard.
  - Discharge valves for scuppers fitted with positive means of closing operable from a position above the bulkhead deck. (Per reference (d), SOLAS, these valves shall be kept open at sea).
  - Drainage system is sized to remove no less than 125 percent of the combined capacity of both the water-spraying system and the required number of fire hose nozzles.
  - Drainage system is operable outside the protected space near the extinguishing system controls.

D.7. Portable Fire Extinguishers

Verify the following:

- Portable fire extinguishers at each deck level, and in each hold or compartment carrying vehicles, and spaced no more than 20 meters apart on both sides of the space.
- Three water-fog applicators.
- One portable foam applicator unit.

Section E: Lifesaving Equipment and Apparatus

E.1. Introduction

This test verifies proper operation of lifesaving equipment apparatus and launching appliances specific to RO-RO vessels.

E.2. Fast Rescue Boat

Verify the following:

- At least one rescue boat is a fast rescue boat approved by the Administration.
- Training and regular drilling of at least two crewmembers.

E.3. Liferafts

Verify the following:

- Every liferaft has float-free stowage arrangements.
- Every liferaft has a boarding ramp.
- Every liferaft is either automatically self-righting or is a canopied reversible liferaft that is stable in a seaway and capable of operating safely whichever way up it is floating.
- Liferafts have a radar responder in the ratio of one transponder for every four liferafts.
- Containers of liferafts fitted with transponders are clearly marked.

E.4. Means of Rescue

Verify the following:

- A means of rapidly recovering survivors from the water and transferring from rescue units or survival craft to the ship.
- Per reference (d), SOLAS, if the MES slide is intended to provide the means of transfer of survivors to the deck of the ship, the slide shall have hand lines or ladders to aid in climbing up the slide.

E.5.
Lifejackets

Verify the following:

- Per reference (d), SOLAS, there shall be a sufficient number of lifejackets stowed near the muster stations so passengers do not have to return to their cabins to collect their lifejackets.
- Each lifejacket has a light complying with the requirements of reference (nn), Life-Saving Appliances (LSA) Code, International Maritime Organization (IMO), 2010.

Chapter 15:
Emergency Drills

Introduction This chapter discusses crew responsibilities during emergency drills.

In This Chapter This chapter contains the following sections:

Section A: Drills

A.1. Fire Drill

This test verifies the competency and proficiency of the vessel's firefighting procedures, training plan, and crew per reference (d), SOLAS.

NOTE: **Typically, there are no drills on overseas initial COC exams for new vessels as the vessel is still under shipyard control. Add drills to the work list for verification at the first U.S. port.**

Pre-Drill: Discuss fire drill and abandon ship drill together with ship personnel (can be combined with the initial meeting with the master depending on ship's procedures).

- Coordinate with the master and/or ship's safety officer to determine the best time and location in which to hold the fire drill. Consider locations where the ship is most likely to experience a fire and the location of the most recent fire drills. Try to minimize disruptions to passenger operations while conducting the drill.
- Do not direct the master or the vessel's crew where or how to conduct the drill.
- Allow the master or the safety officer to describe to the examiner(s) what takes place during the drill so he or she can know what to expect while witnessing the drill. The examiner needs be aware of what the vessel's procedures are and what events and procedures are required to take place while the fire drill is ongoing. Emphasize during the pre-drill meeting that the safety of the crew is most important.
- Consult the station bill to determine the duties and location of other crewmembers.

A.1.a. Decision Support System on the Bridge

Verify the following on the bridge:

- Communications between bridge and emergency teams. Orders are passed down the chain of command, and information and reports passed up smoothly.
- General alarm is audible (if drill procedure is to sound it).
- Fire control plans available and used.
- Log being kept.
- Emergency/test messages sent/simulated.
- Presence of an assigned GMDSS operator (with no other duties).

NOTE: **Verify the drill follows the emergency response plan contained in the Decision Support System per reference (d), SOLAS. The crew quickly locates, identifies, and explains the plan. Evaluate the master's actions and his or her ability to maintain control of the emergency and direct different aspects of the emergency response.**

A.1.b. On Scene

Verify the following:

- Witness crew initiate drill.
- Vessel's fire alarm/general alarm sounds, is audible in drill locations.
- Operation of watertight doors, fire doors, fire dampers and main inlets and outlets of ventilation systems in the drill area.
- Adequate communications established between control stations and the fire team.
- Firefighter's outfits are properly donned and include proper gear (see Chapter 8: Firefighting, Section A: General for more details).
- Crew uses the vessel's firefighting procedures to attack the simulated fire.
- All crewmembers can effectively communicate with each other.

NOTE: **To prevent confusion and keep the flow of the drill process, do not debrief local elements of the drill (fire teams and scene leaders) locally. Debrief master and other designated staff after the drill.**

A.1.c. Staging Area

Verify the following:

- Proper command and control.
- Location is safe.

A.1.d. Medical Team

Verify the following (if the ship has procedures for using medical teams during fire drills):

- Staged and ready to deploy.
- Necessary equipment available.
- Team uses the appropriate route of egress.

A.1.e. Boundary Cooling Team

Verify the following:

- All surrounding spaces (all six sides surrounding space with fire) are protected/verified per vessel's procedures.
- Crew followed the vessel's procedure with evacuating cabins if the fire was located in such an area where cabins could be in danger.

A.2. Abandon Ship Drill

This test verifies the competency and proficiency of the vessel's crowd control measures, abandon ship procedures, training plan, and crew per reference (d), SOLAS.

NOTE: **While verifying the following procedures, verify crewmember's ability to communicate and direct passengers to muster stations, maintain traffic control, and evacuate cabins.**

- Coordinate examination team to ensure they witness all areas of the abandon ship/lifeboat lowering operation.
- General alarm is audible, if drill procedure is to sound it.
- All crewmembers muster at appropriate abandon ship stations. Consult the station bill to determine duties and location of other crewmembers.
- All crewmembers are properly dressed (lifejackets/stairway guide identifiers) for the drill per the vessel's procedures.
- Exempted crewmembers are accounted for as missing during muster.
- Witness the crews start lifeboat engines on the inboard side and demonstrate ability to provide both forward and astern way.

NOTE: **Per reference (d), all lifeboats, including those with water-cooled engines and those used as tenders, must be run weekly for 3 minutes to ensure proper operation of propulsion engine. For exam purposes, water cooled engines may be stopped immediately after demonstrating proper operation. For newly constructed vessels, lifeboats not verified during the overseas portion of the exam will be verified at the first U.S. port.**

- Full hard over rudder movement for inboard boats.

A.2.a. Decision Support System Passenger Assistance

Verify stairwell guide and muster station leader knowledge:

- Spot check stairway guides' knowledge, familiarity of duties, and passenger interaction through question and answer (ask for copies of the safety familiarization questions provided to the crew).
- Spot check muster station personnel for knowledge and familiarity of duties through question and answer (use vessel safety sheets if available).
- Crewmembers assigned to assist passengers can communicate at least enough information to direct a passenger to the proper muster area.

A.2.b. Liferaft Inflation and Crew Training

Verify the following:

- Launching of davit-launched liferaft.

NOTE: **Per reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series), do not accept a training liferaft unless it is substantially the same size and type liferaft used for primary lifesaving.**

- Liferaft crew can effectively and safely launch all the primary liferafts serviced on one davit in 30 minutes by extrapolating the time it takes to launch one liferaft (for example, if there are six liferafts serviced on one davit, the time to launch one liferaft and lower it to the water is 5 minutes).

NOTE: **Launch to include hook-up, swing-out, or deploy.**

- After stowing lifeboats, assess operation of the launching appliance, crew's performance, and ability to effectively communicate.

A.2.c. Launch and Recovery of Rescue Boat

Verify the following:

- Crew proficient in launching.
- Recovery time not more than 5 minutes in moderate sea conditions.
- Ability to lower lifeboat using the self-lowering device, when fitted.

A.3. Post Drill Verify that all elements of a fire drill and abandon ship drills meet reference (d), SOLAS.

NOTE: **Conclude drill and debrief master and crew. Include the examination team observations on areas to improve or address.**

Section B: Passenger Muster

B.1. Introduction

As part of each initial exam at first port visit, witness a passenger muster per reference (d), SOLAS. If an exam is scheduled but passengers have not embarked in your port, a passenger muster is not required (per reference (b), USCG Marine Safety Manual, Volume II: Materiel Inspection, COMDTINST M16000.7 (series)).

B.2. Crew Competency

Verify crew competency at the muster by his/her:

- Ability to direct passengers to muster stations.
- Instructions provided to passengers on the use of lifejackets.
- Actions to take in an emergency situation.
- Actions taken by corridor and stairway monitors.

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Chapter 16:
Post Examination

Introduction This chapter discusses post examination procedures.

In This Chapter This chapter contains the following sections:

Section A: Post Examination

A.1. Introduction

Purpose is to debrief the owner, shipyard, RO, and master about the exam findings and document any outstanding work list items if needed.

A.2. Post Initial COC Overseas Exam

- Discuss findings and identify completed and outstanding work list items.
- Identify outstanding documentation/plans RO is to finalize.
- Sign and distribute copies of final work list.
- Scan application for inspection and final work list to MISLE activity.
- Scan Section A of NVIC 04-04 into MISLE per reference (dd), MISLE Data Entry Requirements for Foreign Vessel Arrivals, Examinations and Operational Controls, MMS Work Instruction, 1 May 2014.
- Close out MISLE case locally. Units responsible for completing the ICOC exam at the first US port will open a new MISLE case to complete the exam.

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A.3. Completing the Initial COC Exam

- The OCMI responsible for inspections at the vessel's first U.S. port call where passengers will embark completes the initial COC exam begun overseas.

NOTE:

The first U.S port should not re-examine items completed during the overseas portion of the initial COC exam.

- Vessel operators should anticipate and plan for at least one day in port to complete the U.S. part of the initial COC exam. Completing the initial COC exam depends on the number of discrepancies left over from the overseas portion of the initial exam. The examination should cover the following areas:
  - Fire and boat drill.
  - Verification of all documents issued to the vessel.
  - Verification of crew training and certification.
  - Any outstanding discrepancies or items not inspected during the overseas portion of the examination.
  - Any unresolved plan review, overseas inspection, or classification society issues.

NOTE: **Typically, there is no verification of documents or drills on overseas initial COC exams as the vessel is still under shipyard control.**

- Discuss findings observations, and any outstanding deficiencies with the vessel master.
- Complete the following:
  - USCG Port State Control Report of Inspection, CG5437A (Form A).
  - Record on USCG Port State Control Report of Inspection (CG5437B, Form B) any work list items the owner cannot correct before issuing the COC.

NOTE: **If the debrief is conducted before the passenger muster, then remind he master that the USCG will remain on board until after the muster is completed. If there are no issues with the muster, then the USCG departs immediately with the muster. If there are concerns with the muster, then the USCG returns to the bridge to discuss findings with the master which might include issuing an additional CG5437B (Form B) requirement.**

- Issue a COC to ship and lifeboat tenders (if needed) if ship is in compliance.
- Follow the procedures for accepting equivalent levels of safety for ships with deficiencies requiring clearance before departure.
  - Proposal by ship.
  - Approval of the ship's proposal by the Flag Administration or RO acting on behalf of the Administration.
  - Acceptance by OCMI/COTP.
- Communicate with other USCG units when:
  - Vessel cannot operate as designed.
  - There could be COTP requirements for safety while navigating in port waterways.
- There are outstanding deficiencies requiring clearance within a certain timeframe.

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A.4. Data Entry

Complete MISLE activity per reference (pp) Marine Information for Safety and Law Enforcement (MISLE) User Guide Handbook (series).

- Include in the narrative drill observations and locations, scope of exam, type of waste stream verified, side of ship lifeboats launched, deployment of liferaft, and highlight of major deficiencies.
  - Add special notes for unusual circumstances, such as ship modifications or other design features affecting vital systems or maneuvering characteristics.
  - Scan COC for vessel and for lifeboats serving as tenders.
  - Scan application for inspection and final work list to MISLE activity.
  - Update all certificate dates.
  - Check all items in "inspection results" section and record deficiencies.

NOTE: **If a vessel owner or operator disagrees with a Coast Guard decision from a plan review or examination, he or she can formally appeal the decision per the procedures in reference (qq), Rights of Appeal, 46 CFR Part 1, Subpart 1.03.**

Appendix A:
Acronyms

AIS	Automatic Identification System.
AMS	Alternate Management System.
ARPA	Automatic radar plotting aid.
ASP	Application service provider.
BNWAS	Bridge Navigation Water Alarm System.
BWM	Ballast water management.
CO_2	Carbon dioxide.
COC	Certificate of Compliance.
COTP	Captain of the port.
CSNCOE	Cruise Ship National Center of Expertise.
CSR	Continuous Synopsis Record.
CVSSA	Cruise Vessel Security and Safety Act.
DOS	Declaration of Security.
ECA	Emission control area.
ECDIS	Electronic Chart Display and Information System.
ECR	Engine control room.
EEBDs	Emergency escape breathing devices.

EIAPP	Engine IAPP.
EPA	Environmental Protection Agency.
EPIRB	Emergency Position Indicating Radio Beacon.
ETA	Estimated time of arrival.
FD	Fire door.
FIM	Firefighting instruction manual.
F/O	Fuel oil.
FPV	Foreign passenger vessel.
FPVE	Foreign passenger vessel exams/examiners.
FSS	Fire Safety Systems.
GMDSS	Global Maritime Distress and Safety System.
IAPP	International Air Pollution Prevention Certificate.
IEEC	International Energy Efficiency Certificate.
ILO	International Labor Organization.
IMO	International Maritime Organization.
INMARSAT	International Maritime Satellite.
IOPP	International Oil Pollution Prevention Certificate.
ISM	International Safety Management Code.
ISPPC	International Sewage Pollution Prevention Certificate.

ISPS	International Ship and Port Facility Security Code.
ISSC	International Ship Security Certificate.
ITC	International Tonnage Certificate.
kJ	Kilojoule.
LLL	Low location lighting.
LRIT	Long range identification and tracking.
MARPOL	International Convention for the Prevention of Pollution from Ships.
MES	Marine evacuation systems.
MISLE	Marine Information for Safety and Law Enforcement.
MMSI	Maritime Mobile Service Identity.
MSC	Marine Safety Center (USCG).
MSD	Marine sanitation device.
NAVTEX	Navigational Telex.
NBIC	National Ballast Information Clearinghouse.
NOI	Notice of intent.
NTVRP	Non-tank vessel response plan.
NVIC	Navigation and Vessel Inspection Circular.
OCM	Oily content meter.
OCMI	Officer in charge, marine inspections.

PA	Public address.
PERC	Perchloroethylene.
PPE	Personnel protection equipment.
PSC	Port State Control.
PSSC	Passenger Ship Safety Certificate.
PWS	Public water supply.
RO	Recognized Organization.
RO-RO	Roll-on/roll-off (vessel).
SAR	Search and rescue.
SEEMP	Shipboard Energy Efficiency Management Plan.
SFP	Structural fire protection.
SMC	Safety Management Certificate.
SMS	Safety Management System.
SOLAS	International Convention for the Safety of Life at Sea.
SOPEP	Shipboard oil pollution emergency plan.
SSO	Ship security officer.
STCW	International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers.
SWTD	Semi-watertight doors.

TTP	Tactics, techniques, and procedures.
UPS	Uninterrupted power supply.
USCG	United States Coast Guard.
VGP	Vessel General Permit.
WTD	Watertight door.


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